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PUBLISHERS' ANNOUNCEMENT.

After a half century of continued use, and owing to the frequency with which requests have been made by many of our subscribers, and several advertisers as well, for a change in the make-up and dress of the JOURNAL, it has been determined to alter these forms. Beginning with our number, to bear date of July 3d, which date marks the commencement of our fifty-third year of publication, the JOURNAL will appear between covers. Further, the reading matter will be centered in the book. The determination was reached mainly on the ground that those who bind their numbers at the end of each half year—and it is a certainty that well over 50 per cent. of our readers follow that practice—will not have such great bulk to deal with as now, under the practice which virtually obliges them to bind in a considerable portion of the advertising matter. It is the pleasant task of the publishers to say that the standing of the JOURNAL, from every point of view, never was better, and we know that its appearance each Monday morning of the year, at the receiving points of its subscribers, is welcomed. In the future, as in the past, the JOURNAL will continue to do its best in safeguarding the best interests of an industry, that within a century has gone from last place to a close first in the annals of the world's trading.—A. M. CALLENDER & CO.

[Special Editorial Correspondence: By Telegraph.]

THE FOURTH ANNUAL MEETING, CANADIAN GAS ASSOCIATION.

QUEBEC, June 15, 1911.

Dear JOURNAL: Here, in the land that traces its modern dating from the first very aging days of Jacques Cartier, and in the district thereof uncovered to moderinity by the same intrepid explorer in 1535, the Canadian Gas Association held its current meeting, and the stately old city of Quebec, rising high above the west bank of the noble St. Lawrence river, never looked more beautiful than it did the morning of to-day. Bright sunshine and brisk airs were the alluring portents that charmed away the frowning skies and misty mood of yesterday; but over all was the pall of gloom. It was early known that, through a most lamentable happening, President Arthur Hewitt, General Manager of the Consumers Gas Company, Toronto, would not be present. To him had come most grievous sorrow. Last Monday, while sailing with two younger brothers, on Toronto bay, they and his eldest son, a lad 18 years, were suddenly thrown into the water through the capsizing of their boat. The boat overturned completely, and the young hero had succeeded in placing the lads safely balanced on the keel, when the youngest, losing his grip, slipped back. Almost immediately the endangered one was returned to a safe position. Then, for some unaccountable reason, the rescuer seemed seized with the desire to swim at once to shore for aid; this although his signals for help had been seen and answered by the immediate putting from shore of several rescuers. He was a sufferer from some cardiac trouble, and before the rescuers reached him he sank and did not rise, although the body was recovered soon after. The other boys were speedily taken out of peril. It is small solace now for his parents to know that their boy, had he been a matured man, a giant in stature, with the courage of a Spartan, he could not have acted with supremer heroism; but when time hath mercifully softened their woe, such knowledge will be a tender heritage.

To add to the perplexity of the Association, at the last moment it was learned that Vice President Philip, of Berlin, would be unable to attend, and it was further learned that the presence of Mr. Norris, of Montreal, was unlikely. However, a wire to that gentleman brought the prompt response that he would put aside pressing duties at home and respond in person. True to promise, he called the meeting to order at 10 o'clock this morning, in the session room of Quebec's municipal chambers. Secretary Keillor, ably assisted by Mr. Charles Brine, of the local Company, occupied the recorder's desk. Acting President Norris, veteran that he is in directing men and the affairs of men, in a trice had the session underway.

A most hearty welcome to the city and its hospitalities was spoken by Mr. M. Cannon, acting as representative of Mayor Napoleon Drouin. The hospitableness of the chief executive was gracefully accepted on behalf of the Association by Mr. Wallace, of the Railway, Light, Heat and Power Company, and here let me say that, Messrs. Carr, Wallace and the other representatives of that well-managed Quebec corporation have acted as hosts in way, manner and means that could not be excelled. Courtesy, attention, heartiness, excellence, variety were their ways and means. Following the welcoming, Chairman Norris, in beautiful phrasing, officially called attention to the reason compelling the absence of President Hewitt, and Messrs. Keiller and Wallace were appointed a committee to prepare and forward to the bereaved parents resolutions in some measure expressive of the sorrow of the Association over their great joint loss. Prominent in the routine business that followed was the report of the Ex-

ecutive Committee. It detailed among other things the acquiescence of the government in the proposition to substitute an appropriate standard for the antiquated one heretofore in use. Other recommendations were that the Association should urge the government to substitute the heat unit value for the existing candle value as the standard gas valuator in the Dominion. The committee also fraternally noted the loss sustained by the Association in the death of Mr. Charles Forbes. The report of Nominating Committee recommended as office bearers for the ensuing year the following named gentlemen:

President.—Mr. Arthur Hewitt.
Vice-President.—Mr. D. J. Phillip.
Second Vice-President.—Mr. A. W. Moore.
Secretary-Treasurer.—Mr. John Keillor.

The report was accepted, and they were subsequently elected by *viva voce* vote. As Secretary, Mr. Keillor reported no outstanding accounts, save a comfortable one to credit. This brought us to President Hewitt address, which was read by Chairman Norris, As was expected it proved a message forceful and practical, dealing with matters of force in present time. A notable series of paragraphs had to do with favoring the plan of a government commission to act as arbitrators in the relations of lighting companies to their customers. The address having been referred to a committee for consideration and report, the Chairman called for an informal discussion on certain maters, particularly those concerned with the thought of substituting a calorific unit for the candle value appraisal, and in respect of the public utilities plan, the dialogue that ensued favored the affirmation side of both proposition. Your correspondent was asked to participate in the debate, and ended by taking occasion to mention the death, in Canada last April, of Mr. William Farmer, who in his time was the most promient of American gas engineers.

At the close of these recountings, a committee charged with making suitable mention of Mr. Farmer's record on the Association's minutes was ordered appointed. This brought the business of the morning session to an end. The programme for the balance of the day is a visit of inspection to the handsome ocean liner "Empress of Britain," by special invitation of the Canadian Pacific Railroad. Luncheon will be served on board; after that function the delegates are to be the guests of the Quebec Railway, Light, Heat and Power Company, in an observation tour through the city, and in the evening a concert is on, the numbers in which are to be interpreted by the members of the celebrated Quebec Cadet Band, the band stage will be on the terrace, and terrace it really is, of beautiful Chateau frontenac. As the next business session will not be held until 10 A.M. to morrow, your date of printing will preclude the usefulness of further telegraphic mention. The attendance, although not large, is representative; the delegates are evidently in right mood to attend the sessions promptly, and your side of the border is well in evidence. —C.

BRIEFLY TOLD.

JUNE MEETING, NEW YORK SECTION, ILLUMINATING ENGINEERING SOCIETY.—The final meeting for the season of the New York Section, Illuminating Engineering Society, was held the evening of the 8th inst. Two papers by the same author constituted the novelty of the evening—"A Corporation Graduate Course in Illuminating Engineering," and "Notes on Comparison of Illuminants," both of which were read by Mr. Sydney W. Ashe. The first paper covered briefly the work going on under the jurisdiction of the author at the Harrison (N. J.) works of the General Electric Company. The second paper covered a variety of lamps in variety of manner, with the result that comparisons would be unintelligble, which the discussion that followed seemed to show. There was no discussion of the first, but the second called forth considerable caustic comment. Mr. Millar stated that, while the mean spherical candle power was the only possible basis for the comparison of illuminants as light producers, a second rating (their co-efficient of utilization) should be given, along with sufficient data covering each type of installation so that the figures could be intelligently used, not simply some one zone, as had been the custom of some manufacturers of reflectors. He criticized the data on gas lamps as neither fair nor correct, and further said, much of the data was given without proper references or authorities. Mr. Macbeth called attention to some prominent errors regarding the gas figures credited to him. Mr. Owens stated that a similar comparison between gas and electricity, in a paper before the recent convention of the N. E. L. A., had proven to the satisfaction of the majority of those present that gas was a back number, so why Mr. Ashe should bother to give it a further setback he could not understand. He also stated he had not seen any figures on gas lighting which had been prepared by an electric man, which told the whole truth; and perhaps the Society would hear a reply to these papers during the next season which would state the case from the gas man's standpoint. Mr. Stickney stated that the figures given were only the mathematical comparison, and that many other features should be considered in determining the value of a light source besides its lighting efficiency. Mr. S. G. Rhodes called attention to the fact that the figures on arc lamp electrodes were all essentially laboratory calculations, and no factor had been given for their operation under working conditions. Mr. Owens reminded those present that tests made by Mr. Eustace and published in the "Transactions," showed the working efficiency of the tungsten lamp to be 50 to 60 per cent. instead of 94 per cent. Others joining in the discussion were Messrs. Evans and Rhodes, and it was closed by Mr. S. W. Ashe who touched briefly upon the points raised. The election of section officers resulted as follows:

Chairman.—Mr. Bassett Jones, Jr.
Managers.—Dr H. H. Seabrook and Mr. H. Thurston Owens.
Secretary.—Mr. A. J. Marshall.

The next meeting will be held either in September or October.

NATIONAL COMMERCIAL GAS ASSOCIATION ACTIVITIES.—The arrangements for the annual meeting and show of the commercial men are now nearing completion. President Stannard recently stated that practically all of the exhibiting space had been taken, and that the lighting and decorations of the auditorium would surpass anything attempted heretofore. The exhibition will open on Monday, October 23d and the sessions on Tuesday. There will be two sessions on Tuesday, one Wednesday and two on Thursday. The papers will be limited to one to each session, but there are a number of committee reports to be presented. If the Entertainment Committee has its way the convention will be notable for the number of ladies present, and arrangements have been made to amuse and care for them. One of the many lures which have been placed before the men of the Association is a venison dinner to be held on the Great Divide. In order to increase both the size and the value of the Association, Mr. H. D. Frueauff has announced a membership contest, the prizes consisting of two free trips to the convention and return. A matter of much greater importance is the scientific gas salesmanship course which starts about July 1st. At a meeting held in New York city, on the 14th inst., the following members of the Board of Educational Control attended:

Geo. Williams, of Henry L. Doherty & Co., New York, Chairman.
P. S. Young, Public Service Gas Company, Newark, N. J.
S. A. Sewall, Denver Gas and Electric Co., Denver, Col.
J. B. Meyers, U. G. I. Company, Philadelphia, Pa.
R. C. Ware, Boston (Mass.) Consolidated Gas Company.
E. L. Elliott, Illuminating Engineer, N. Y. City.

The final details of the course were arranged and the committee announced that nearly 300 applications had already been received.

NEW JERSEY STATE GAS ASSOCIATION.—At a meeting recently held at the office of the Public Service Gas Company, in Trenton, N. J., the New Jersey State Gas Association was formed. The following gentlemen were present, representing their respective companies: C. Butcher, Freehold (N. J.) Gas Light Company. A. F. Reitmeyer, Perth Amboy (N. J.) Gas Light Company. C. F. Denton, Elizabethtown Gas Light Company, Elizabeth, N. J. O. F. Potter, Public Service Gas Company, Newark, N. J. W. H. Pettes, Public Service Gas Company, Newark, N. J. A. H. Osborn, The Coast Gas Company, Belmar, N. J. C. G. Cook, Public Service Gas Company, Trenton, N. J. J. P. Hanlan, Public Service Gas Company, Newark, N. J. The following officers and directors were elected:

President.—Mr. W. H. Pettes.
Vice-President.—Mr. C. Butcher.
Secretary and Treasurer.—Mr. Arthur H. Osborn.
Directors.—Messrs. P. M. Satterthwait, O. F. Potter, A. F. Reitmeyer, S. J. Franklin.

Mr. W. J. Clark, of Mount Vernon, N. Y., addressed the gathering regarding the benefits of State organizations and the attitude they could properly assume in connection with Public Service Commissions. Those desirous of obtaining further information should address Secretary Osborn.

CURRENT MENTION—

THE annual spring meeting of the Golfing Club of the associated gas companies of New York city, was brought off on the beautifully kept course of the Oakland Golf Club, Bay Side, L. I., the 8th inst. The weather accompaniment, the magnificent course, in the pink of condition, and an enthusiastic assemblage, were the links in the chain that caused everything to go with a rattle and a dash. As to the real creature comforts, during the gap in the golfing and at its ceasing, these were in the custody of a committee—positive in whose ranks was that clever gentleman, Mr. H. B. McLean—that was untiring in efforts, hospitable in reception and directing, and successful in detail; not the sign nor the sound of a martinet anywhere. In the different classes 39 players figured, and the outcome of the contest is appended: The Cortelyou prize (donated by President G. B. Cortelyou) went to Mr. E. S. Young. The runner up prize (donated by Mr. George W. Doane) was taken by Mr. H. M. Edwards. The 36-hole gross-score taken (the gift of Mr. R. A. Carter) went to Mr. J. W. Bitter. The 18 hole handicap, first section (presented by Mr. Walter R. Addicks) fell to Mr. E. L. Spencer; the second prize (by courtesy of Messrs. H. L. Snyder and C. G. M. Thomas) was awarded to Mr. M. M. Graham. The 9-hole novice club memento (from Mr. H. M. Edwards) was won by Mr. C. S. Fox; and the best selected 18-hole tryout (presented by Mr. L. B. Gawtry) went to Mr. J. B. Hare. The 18-hole bogie handicap (presented by Mr. R. E. Livingston) and with seeming appropriations, was gained by Mr. H. L. Underhill; the kickers' handicap (given by Mr. N. F. Brady) going to Mr. Philip Torchio, whose life naming well befits his calling. The scoring was done by Mr. Oscar H. Fogg, whose name is far from indicating his real personality. The well planned, appetizingly cooked, satisfactorily served dinner that followed was synchronously directed by our own W. J. Clark, whose resplendent qualities as toastmaster were once again ably attested. It may not be altogether appropriate to name who were the diners. However, they numbered 46, and in the double 23 were President Cortelyou—whose speech was of the finest; that master of inoffensive executive ability, Mr. Walter R. Addicks; and that best-beloved of all gas men—Chief William H. Bradley.

A Novel Development in Laboratory Burners and Furnaces.

Mr. Chester G. Fisher, in the April issue of *Metallurgical and Chemical Engineering*, writes that no other piece of apparatus has become so commonplace in the laboratory as the burner, yet it has gone for years practically unaltered. This is really remarkable, when we consider that thousands of chemists and metallurgists have time and again tried to "push" the burner in an endeavor either to hurry an operation or to obtain a little higher temperature than the design of the burner permitted. It has remained for Dr. Méker, a French scientist, to question the use of the Bunsen burner in such respect, and to prove it both inefficient and extravagant.

The ideal burner must produce the hottest flame possible with minimum consumption of gas, which flame should also be homogeneous. In order to do this, problems similar to those which present themselves in the gas engine must be solved. First, the valves and passages must fill the cylinder with a homogeneous mixture of gas and air in the proper proportion for perfect combustion. Second, all obstacles which retard the operation must be done away with, in order to allow the burnt gases to quickly pass off and the cycle to be repeated immediately.

A study of perfect mixtures soon showed quite a difference in the proportion of air, depending upon the kind of gas used, which settled the fact that burners of different designs must be used for artificial, natural and gasoline gases A burner with an adjustable gas supply, such as a needle valve, would not do, as the proper adjustment would be guesswork; furthermore, such a valve would throttle the gas supply badly. Experiments proved that 6 parts of air to 1 part of coal gas made a perfect mixture, while the proportion prevailing in the ordinary Bunsen burner was 2½ parts of air to 1 part of coal gas.

It might be explained that 6 parts of air to 1 of coal gas could not be used in the Bunsen burner, as this is a highly explosive mixture, and the flame instantly "fires back." The lack of sufficient air for complete combustion in the Bunsen burner accounts for the cold cone in the center of the flame, as the extra air necessary is only obtained on the outside of the flame.

Dr. Méker, after experimenting with innumerable designs and much painstaking work, finally produced a burner using the perfect mixture. In this burner the gas enters the bottom and the air at the sides through many large inlet holes, the two being thoroughly mixed in special shaped tube, passing up at a high rate of speed. The "back-firing" of the flame is prevented by a nickel grid at the top of the tube; this grid is about 10 mm. thick and has openings about 2 mm. square. The openings being large do not impede the flow of gas, yet the flame cannot flash back, as the deep grid is comparatively cool on account of its depth.

The result is a large, homogeneous, hot flame, made up of numerous small flames, and the unusual effect is noted by comparing the temperatures of the different parts of the Méker flame with that of the Bunsen flame, as shown in Fig. 1. The temperatures given in this photograph were measured with a Le Chatelier thermo-couple $\frac{8}{10}$ mm. in diameter.

It will be observed that the coldest part of the Méker flame is hotter than the hottest point of the Bunsen flame, that the Méker flame is almost uniform, and that the same very high temperature prevails across the large diameter of the flame. The uniform flame produced by the Méker burner has a still further great advantage, in that it does not produce irregular expansion in glass or porcelain vessels being heated and, therefore, greatly reduces the risk of breakage. From the photograph one can readily understand why a large-size Méker burner will replace a Bunsen blast lamp.

Dr. Méker, not satisfied with designing the improved type of burner, also designed an equally efficient furnace in which to use these burners. The combination of an ordinary Méker burner and a Méker crucible furnace enables gold, silver and copper to be melted without the aid of compressed air, and this is done as readily as water is boiled with an old-style Bunsen burner.

It naturally followed that, if such a large increase in efficiency could be obtained without blast, an equally large increase could be shown over the Bunsen blast lamp when compressed air was used with the Méker burner. Dr. Méker also designed, along the same scientific lines, a burner using compressed air, with the result that this burner of ordinary size melted 105 grams of platinum in 17 minutes. In combining the Méker blast burner with a furnace it was found that special, high-refractory clay had first to be prepared for use in lining the furnaces.

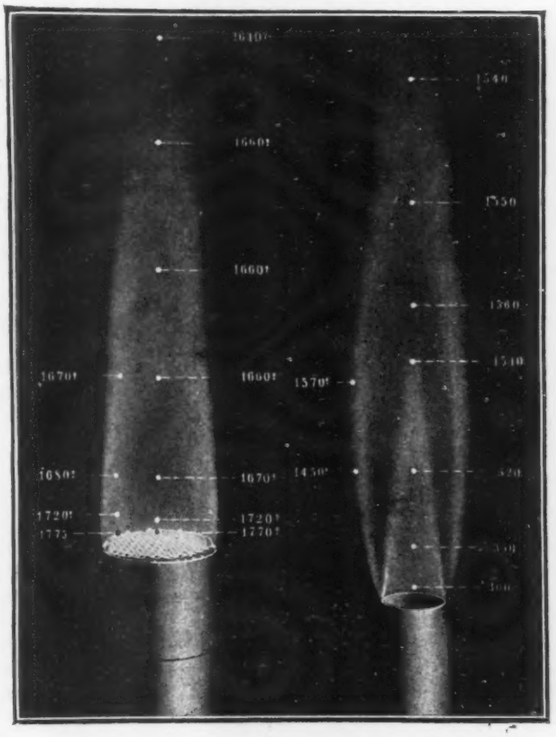

Fig. 1.—Comparison of Meker Burner and Bunsen Burner.

Melting Gold, Silver and Copper Without Blast.—Fig. 2 shows a plumbago crucible, which has been heated in a specially designed furnace, wherein the flame from the Méker blast lamp is made to circle around the crucible. The plumbago crucible (Fig. 2) shows

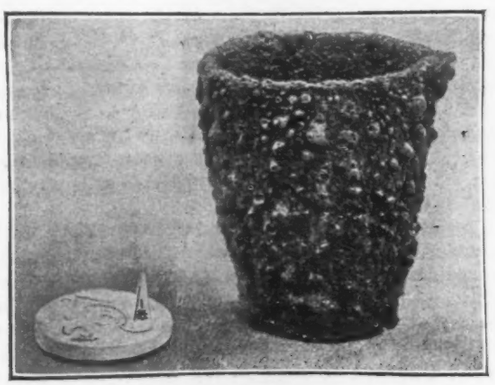

Fig. 2.—Test of Plumbago Crucible.

the blistered effect due to the boiling out of the clay used in its construction. The four pyrometric cones shown beside the crucible were in it when it was heated. It is seen that three cones have fused, including one melting at 1,770° C., and the only one standing had a fusing point of 1,810° C. The results of official tests made by the Société Technique de l'Industrie du Gaz are as follows:

Test No. 1.—Consisted of measuring the consumption of gas necessary to bring to a boiling point 6 liters of water, with a Méker and with an ordinary Bunsen burner, both regulated to about the same gas consumption per hour. With the Bunsen burner the boiling point was reached after 27 minutes, 40 seconds, and the total consumption of gas was 305 liters. The Méker burner heated the same volume of water to a boiling point in 22 minutes, 30 seconds, and consumed 223 liters of gas. This shows a result in favor of the Méker burner of 23.3 per cent. in time taken up, and a saving of 36.7 per cent. in gas by its use.

Test No. 2.—Consisted of bringing a crucible up to a high temperature, at first with a Bunsen blast lamp (gas and air), afterwards with an ordinary Méker burner without air blast. The temperature obtained in both cases was 1,060° C. The Bunsen blast lamp consumed 543 liters of gas, while the Méker burner consumed only 273 liters.

The temperature obtained was measured with a thermo-electric couple and a standardized galvanometer. This shows a waste of 98 per cent. in gas consumption by the blast lamp over the Méker burner, with considerably less labor for the operator of the Méker burner and greater regularity of temperature, arising from the discarding of the air blast. Other burners of different shapes and designs are made, in order to meet the conditions ordinarily found.

In view of the large amount of work done by Dr. Méker in perfecting these burners, it was very fitting that the Société Technique de l'Industrie du Gaz should conclude its report as follows: "Considering that the burners of Dr. Méker permit of working in ranges of temperature formerly impossible to obtain, and thus contribute, both in the laboratory and in the industrial world, to the increased usefulness of gas, the committee has decided to reward the inventor by awarding him the diploma and silver medal of the Society."

These burners and furnaces are now placed on the market in this country by Dr. Méker's American agent, the Scientific Materials Company, Pittsburgh, Pa.

The Sampling of Coal in the Mine.

The Bureau of Mines, Washington, D. C., is publishing a series of short papers, to be known as "Technical Papers," intended to convey to engineers and others quickly the results of certain of the investigations. The first of these, known as Technical Paper No. 1, was issued last month under the title, "The Sampling of Coal in the Mine." The author is Joseph A. Homes, the Director of the Bureau. Respecting the general statement the author said: In connection with the fuel investigations that were begun by the United States Geological Survey about 6 years ago, the question of whether or not to publish all known authentic analyses of American coals was considered; and it was decided not to publish them, because, with respect to by far the greater number of analyses, either no reliable record of the samples was available, or else the purpose and method of collecting the samples had been such as to render the analyses, however carefully made, of little or no value to the public.

In planning the fuel investigations of the Geological Survey, the committee having the matter in charge (Messrs. E. W. Parker, M. R. Campbell and the writer) decided upon a plan of sampling coal in the mine that it was believed would satisfy the following requirements: (1) Each group of mine samples submitted for analyses to represent fairly the commercial shipments of coal from the mine in which they are collected. (2) The complete history of each sample to be known and recorded. (3) Each sample to be analyzed promptly and by the best standard method.

This plan of collecting mine samples was initiated during 1904, largely under the personal supervision of Mr. Campbell. With various modifications it has been continued from that time up to the present by those geologists of the survey, who, under Mr. Campbell's direction, have been examining the coal deposits on or near the public lands, and by those engineers of the Survey and the Bureau of Mines, who, under the direction of the writer, have continued the work of analyzing and testing the coal from the various fields in the United States.

The following statement of the system of mine sampling in use by the Geological Survey and the Bureau of Mines has been revised by Messrs. M. R. Campbell and David White, of the Geological Survey, and Mr. G. S. Rice, of the Bureau of Mines.

In dealing with coals, no less than in dealing with ores, the taking of the sample requires as much care as does the making of the analysis or assay. And the difficulties in the way of obtaining, at reasonable cost, a sample of coal that fairly represents the commercial product as found in the mine or, more especially, as loaded in cars or in ships, have seriously retarded the movement for the sale or purchase of coal on a rigid specification basis.

The purpose of this paper is to describe briefly the method now followed by the Bureau of Mines and United States Geological Survey in an endeavor to take mine samples that fairly represent the beds of coal that are examined and that show, for the places sampled, the commercial possibilities of these beds. It is of the utmost importance that the sampling be done in a systematic manner, according to a prearranged plan, and that the same procedure always be followed where circumstances permit. Wherever possible, unless special samples are desired for a particular purpose, only clean, fresh coal should be sampled, and all dried, weathered or long-exposed coal should be avoided. When weathered coal, either in the outcrop or in pillars, or other special samples are collected, the particular characteristics of each sample should be clearly described.

Those interested may obtain copies of this most interesting paper by applying to the Director, Bureau of Mines, Washington, D. C.

[Official Report—Furnished by the Secretary—Continued from Page 1156.]

PROCEEDINGS, THIRD ANNUAL CONVENTION, PENNSYLVANIA GAS ASSOCIATION.

Held at Reading, Pa., April 12, 13 and 14, 1911.

First Day—Afternoon Session.

The President announced that the next number was the paper by Mr. J. W. Murdock, of Bethlehem, Pa., entitled

METHOD AND COST OF OPERATING WATER GAS PLANT.

In the absence of the author, I will ask Mr. Rhoades to read the Murdock paper.

Mr. Rhoades read as follows:

Gentlemen:—I present to you in this paper data showing the cost and method of operating a water gas plant not equipped with modern appliances. This statement includes cost of operating, materials, purification and cost of maintenance. Operating cost includes pumping 60 per cent. of output to our distributing station (about 1¼ miles) and a proportionate share of salaries of manager and superintendent.

The plant consists of one 6-foot and one 5-foot, straight run, U. G. I. water gas sets. The 6-foot machine was rebuilt in 1904, being then changed from a Springer type to a U. G. I. straight run type. But we operate these machines on the up-and-down run principle, as follows: We make 3 straight runs up, reverse each fourth and make 1 down run. The latter is made as follows:

Close valve between condenser and wash box, open and clean out doors at bottom of generator, start blower, open blast valve or carburettor between generator and superheater and close stack valve. Then blow fire downward until full flame comes out of clear doors, showing that we have a solid bed of fire in generator. This down blow usually requires from 8 to 12 minutes. The blast is now shut off, stack valve is opened, clean-out doors are closed, blast is again turned on and straight run method is now resumed. It requires from 2 to 3 minutes blowing up to get the fire to the proper temperature to admit oil and steam.

While this 2 or 3-minute up-blow is taking place the valve between wash-box and condenser is opened. This valve is closed at beginning of down-blow, to prevent seal in wash-box from being broken and thus forcing blue gas into relief holder. I might state here that during the past month we have changed this method of making each fourth run a blow-down, to making each third run a blow-down, and we find our results are much better, because our blow-down time is reduced from 8 to 12 minutes for the fourth run method, to from 5 to 10 minutes for the third run method.

We find that method of operating this type of machine most economical, because the blow-down fixes the fire thoroughly in generator. Frequent cleaning of generator is not necessary when this method is employed, one cleaning of generator fire being sufficient for a 12-hour run, while the average make during these 12 hours is 20,000 per hour.

The economy obtained in operating this type of machine by that method is clearly shown by the following figures, which are the results of operating our plant during the year 1910.

Total quantity of gas made	78,126,000 cubic feet
Total generator coal used	3,242,884 pounds
Total boiler coal used	1,727,970 pounds
Total gas oil used	295,533 gallons
Average generator coal used per 1,000 cubic feet	41.50 pounds
Average boiler coal used per 1,000 cubic feet	22.11 pounds
Average gas oil used per 1,000 cubic feet	3 78 gallons
Average heating value per cubic foot of gas	600 B.T.U.
Average candle power	22 C.

No barometer or temperature corrections were made in the above figures of the total amount of gas made.

The material we use in purifying is the ordinary iron oxide mixture, and our apparatus consists of 3 boxes 17 feet by 11 feet by 3 feet 6 inches deep. Our method of revivifying *in situ* is a departure from

the ordinary practice and gives us very good results. The method of revivifying is as follows: Close gas inlet valve between exhauster and relief holder, open air inlet valve between gas inlet valve and exhauster, so as to admit air to exhauster, close valve on outlet from purifying box. Remove caps from covers of purifying boxes and blow air through boxes by means of exhauster.

The average time required each day for blowing air through boxes is from 2 to 3 hours. This blowing is done at night by the night fireman, when no gas is being made, therefore causing no additional expense. I have given you the results obtained in a plant not equipped with modern appliances; and I trust that this information will be helpful to those of you who are running small plants under similar conditions.

DESULTORY WORK.

At the suggestion of the President, the discussion was postponed, in the belief that Mr. Murdock would be present before the convention finally adjourned.

The Secretary read a congratulatory telegram from the Secretary of the Natural Gas Association, which message he was instructed to answer appropriately.

The President announced that, as they had four papers remaining on the list, they could have one paper next morning, together with a stereopticon exhibition by Mr. Bigelow. For the afternoon a pleasure trip was planned, which would leave three papers for Friday morning, the disposing of which would likely be done to permit of an adjournment at noon. He thought, however, that prior to the recess he would like to hear something from the members respecting the practice in charging for gas by prepayment meters. He would like to know what the prevailing practice was, especially in the instance of charging a higher rate per 1,000 for such service.

Mr. Ganser—We charge 10 cents per 1,000.

Mr. Gillingham—Up to last year in Wilkes-Barre we charged the gross rate for gas so supplied, without discount. While we charge at Hanover the regular rates, I believe the proportion between the prepayment and regular meter is much more than at Wilkes-Barre. I believe the right way is to charge the gross rate.

The President—Your opinion is the rate should be the gross rate on gas supplied the prepayment meter?

Mr. Gillingham—Yes, sir.

Mr. Dutton—We charge 10 cents extra in all our districts.

Mr. Ganser—Up to 100 prepayments it seems right to charge the net, but when you have 300 or more prepayments set the expense account, as to first cost and as to carrying charges, mounts up.

Mr. Rhoades—We charge an extra 10 cents, but that was a mistake when it was given out on the fuel meter too. When the two rates are brought to one rate (if that ever happens) 10 cents will be added for the prepayment meter service. The literature from England and Germany, as well as that of this country, will show you the actual cost of carrying a prepayment meter is from 12 to 20 cents per 1,000 above the regular way.

The President—Another question on like line: Does anyone know whether legal objection has ever been raised in the instance of an extra charge?

Mr. Rhoades—The literature that I referred to came out as to rates which were allowed right along.

The President—In this country?

Mr. Rhoades—Yes, and in England, too. You will find the matter in the "Proceedings" of the Commercial Gas Association.

Mr. C. W. Stewart—Where prepayment meters are served and an extra charge made, how is it managed, when there is a minimum charge, whether you enforce that minimum charge on slow meters or prepayment meters?

The President—A very pertinent question. Will somebody answer it. The question is, with a minimum charge and a deposit, when the meter does not reach the minimum charge what is done in that case by those who charge more for the gas supplied through prepayment meters?

Mr. Ganser—We have attempted to make a minimum charge, but without much success only on prepay meters. We talked over this a few days ago, and are going to be more positive in carrying it out. Very often people want a prepay meter for no other reason than dissatisfaction with the current month's bill, and believe when the rate is higher with a prepay meter the consumption would be reduced. Those complaints became so disagreeable that we have been proceeding with the change. They got coming so frequently, but often after having the prepay a month or so they wanted them changed back. Then we made this rule: "We will give you a meter, but if this meter is not satisfactory, and must be removed within less than a year's time, we will charge you 50 cents to make the change." We give them all the facts relating to the two types of meters, the difference in rates, the annoyance that might go along with a prepay meter in not having a quarter dollar at hand, making them fully conversant with the proposition, then if they wanted it changed we charged them 50 cents. We have quite a few prepay meters in use that do not anywhere near pay us. We have been charging 50 cents on some of those, but where to start or where to stop has been the problem. We have a few consumers whose use of a prepay meter during a number of years has not averaged $6 per year from them. In those instances we insisted upon 50 cents a month. I realize this is an irregular way of doing, but we are hoping to reach a condition that will be satisfactory to all concerned.

Mr. Dutton—With reference to this service charge. We have one of 50 cents per month on the regular type of meter, and we intended also to collect it on the prepay; but found it cost more and raised more trouble than it was worth, so we discontinued; or rather, we did not enforce the collection of the minimum charge for monthly service charged on the prepay meter, but increased the cost or charge per 1,000 ten cents, and further tried to discontinue the requests for them. We insist on $1 deposit with each prepayment meter, whether it comes from the owner of the property or his tenant. We do so in order, first, to do away with the insistence for the prepayment meter; secondly, to get out of the change of tenants when the people move in the building. We find it is very hard to keep track, particularly where you are operating in 35 or 40 towns, as we are, to many people moving out and in, not knowing the names. We have had people disconnect their line to go away, leaving the pipe without any cap on the end, then other people who moved in would turn on the gas. In one case a consumer caused the blowing out of the back of a house through turning gas on the prepayment meter. If we had $1 deposit on every meter when the people moved away, and we knew the house was unoccupied, we could keep track of it.

Mr. Rhoades—We do not have a monthly charge on our prepayment meters, but find that a great many of our customers, using regular meters, as has been indicated, asked for prepayment meters on various pretexts; but where the regular meter is in we charge $1 for making the change, which about covers the cost, although not in every instance. We make that charge to cover the cost for their own convenience, which is proper and right. If a man having a prepayment meter wishes to change to a regular meter he should surely be charged with the cost of making the substitution.

Mr. Gotwals—In what Mr. Ganser said (it probalby did not recur to him) people having the ordinary meter, and wishing to change to a prepayment one at Norristown, we will not change it unless the consumption shows an average of $1 per month.

The President—Gentlemen, I thank you very much for this information, which I wanted for a particular purpose. One more announcement and then we will adjourn. We would like to have all Pennsylvania gas men, in order to discuss a question that is not of interest to any present from other States, and which has no connection with the routine work of the convention, to meet at 7 P.M. in the Board of Trade rooms, 26 North 6th street. The business to be considered can be completed in time to have you all meet each other to share in the entertainment that may be provided.

Mr. Dutton—Before we complete the prepayment meter talk, I would like to ask—I think all of you are interested in this question, so many people having asked it—as to charging a higher rate than a minimum one. Do any of the companies find that prepayment users consume as much or even one-third as much, as the other consumers? Has that anything to do with the question we are trying to have answered?

The President—State the proposition plainly.

Mr. Dutton—Are you getting as much, or within 33⅓ per cent. as much output from your prepayment gas consumer as from your regular meter? Whether that has not something to do with the desire to increase the price of gas on them?

Mr. Beck—Our experience is, it reduces the consumption probably 40 per cent. Consumers who used from $3 to $4 a month ordinarily, when we put on a prepay meter, have cut their use down to $2 and $2.50. We find it is a losing proposition from the revenue end. We first installed them to collect bad debts, setting all meters at a $1.75 base rate, with the discount down. We have about 350 in use to-day, all rated at $1.75. In that way we are able to collect the minimum charge, but we sell gas on a sliding scale, $1.75 to $1, according to the consumption. We could not have all meters adjusted to each in-

dividual consumer, so we charge everybody $1.75 and discount their bills just the same as an ordinary gas bill is sent out. A card is sent them which they return to the office and get the rebate. If they owe us anything we send out a bill, and if they fail to pay it when they do use gas we collect it from the surplus. I would like to ask those companies that charge an excess price if the consumer is aware of that fact or agrees to pay the increased price before commencing to set the meter.

Mr. Butterworth—Our experience is that some consumers, for whom we set meters for that use, use less gas. On the whole, we sell more gas through the prepay meters than through the others, from the same people; but we have a lot of business we could not get at all without it. Our receipts from prepay meters are more than those from common meters.

The President—That is a very rare case.

Mr. Beck—In the case of restaurants and hotels, or where it is necessary to use gas, just as much gas would be taken through the prepay meter as through the ordinary. The reduction occurs in private residences, in which the prepay cuts the bills 40 to 50 per cent.

Mr. Gillingham—We are not answering Mr. Beck's question about consumers knowing they are paying the full rate in using prepays. When they ask for a prepay meter we tell them that in doing so they do not get the discount, and we used as an argument that fact to further the use of our regular meters instead of the prepays.

Mr. Rhoades—As to Mr. Dutton's question, I find a slight reduction, but not equal to 25 per cent. It would be nearer to 15 per cent.

The President—There is a reduction?

Mr. Rhoades—Only a slight one. As to the other question. We always say to those applying for a meter, that the charge through the prepay is 10 cents per 1,000 more than through the regular type.

Mr. Ganser—I think Mr. Cresson could answer Mr. Dutton's question.

Mr. Dutton—Whether the average used by the prepay is up to the average of the regular?

Mr. Cresson—And then something about 33⅓ per cent?

Mr. Dutton—Whether it was nearer that.

Mr. Cresson—We would find the average is less than with the ordinary meter; but not very much.

Mr. Beck—Speaking along those lines, I made a list of 100 private residence consumers, about in the same territory, running on ordinary meters; also 100 prepays. The neighborhood of the latter averaged about 88 cents a month, the former about $1.50. That is the way I sized it up.

Mr. Rhoades—I think one cannot take a territory in which to pit one meter against another, to fairly find out anything particular about it. The plan followed in Reading looks the proper one. About a week ago I had occasion to look over three installations of this kind, and an examination showed that with the prepayment meters the amounts were within a few cents of those registered on the regular meters; the amounts were practically the same.

Mr. Williams—I think, figuring the subject of the prepayment meter, a factor which should be considered has not been brought up. A couple of years ago I compiled data on this subject, having then the general idea that the consumption was less on the prepay than on the regular; but in working up this data, which covered 2 years (we had, I think, about 2,000 prepays in use), I was surprised to find the consumption per meter averaged pretty close to that of the regular type. Taking into consideration that the consumption per meter on your regular meters is brought up by a very few large meters, through which you have a very large consumption, which you do not have with your prepayment, I think you will find the consumption per prepay meter is as small as you are figuring on. My experience is that the consumption on the prepay is (while it may be slightly less, because I think the use of the prepay meter tends to economy), is not so very much less than the regular meter. Eliminating your large, regular meters in figuring your sales per meter, I do not think you will find much difference. At least that has been the way my trials have gone.

Mr. Williams—Mr Keppelman in the first 3 months will find that his consumption decreases with the prepayment. After that it will go on just the same as with the ordinary meter. When you first change the meter the housewife looks to see how long the quarter will last for the first 3 months; getting tired of that, she often loads the prepayment with 3 quarters at a time.

The President—Gentlemen, I want to return my thanks for the information given us; but before we adjourn another announcement. To night we have a smoker in this room at 8 o'clock, so provide yourselves with tickets. [An adjournment to 9 o'clock the following morning was ordered.]

SECOND DAY, MORNING SESSION.

The President called the meeting to order at 10:15, and announced that the first paper would be read by Mr. L. R. Dutton, on the subject of

FURTHER NOTES ON AUTOMOBILE AND MOTOR CYCLE EXPERIENCE.

Mr. Dutton, prior to reading the paper, said it might be noticed that changes in the paper had been made. It was gotten out hurriedly, and the printer published it before getting the proof corrections. As a result there are omissions and errors, which can be noted on the copies distributed.

The delivery problem is a matter for serious consideration for the company or firm which desires to save time and mon ey. The past year has witnessed an unusual and rapidiy increasin g activity in the production of motor cars for all kinds of industrial purposes. The success which has been attained by the 3 to 5-ton (or heavier) type of trucks has been appreciated and broadened the market by creating inquiries for a light truck carrying 500 to 1,500 pounds.

The superiority of the motor-driven vehicle is manifest at all times over the horse propelled vehicle. In the heat of summer, or the snow and ice of winter, the motor truck does not weary, but easily ploughs through the snow or travels the streets regardless of weather conditions.

The standard motor of the heavy gasoline truck is the 4-cylinder, 4-cycle type, water-cooled, 25-horse power for 3-ton, and 50-horse power for 5-ton capacity, with the motor at the front end of the frame. Some builders favor the motor under the hood, front of the driver; others favor placing it under the seat. Each position has some advantages, and both type trucks are successful in service.

Most all the heavy trucks are equipped with chain-drive wheels, are from 36 to 42 inches in diameter, fitted with solid rubber tires, 4 inches wide front to 6 inches wide rear. The wheel-base varies from 100 to 144 inches, regular tread, with semieliptic springs front and platform type rear. Speeds vary from 9 to 15 miles per hour. No figures of costs for operating heavy gasoline trucks can be quoted by the writer, save the following reported by one gas and electric company, which uses 15 electric trucks ranging from 1 to 5 tons capacity. It states:

"We are more than satisfied with the work we are doing with these electric trucks, and are looking forward the present season to displacing all our horses with electric vehicles of different kinds for doing our work, as we know from our experience that this will save us money. It would be practically impossible for us to do the work we are now doing through one central shop, were we using horses. We are also able, with electric trucks, to get on the job much more quickly, when doing work in suburban districts where there are no street cars. In cases of this kind, we have our laborers and foremen call at the shop and draw them out in a 5-ton truck, getting them on the job at 7 A. M., calling for them again at 5 P. M. In doing this we save at least 2 hours per man, and figure that a gang of 40 men will save $12 per day, besides our having the use of the truck during the day.

Another thing to be considered is the small amount of space necessary to take care of these trucks as compared with the amount of space necessary to take care of horses and wagons needed to do a like amount of work. There was the room needed for the horses; wagons to be kept under cover; room for the hay and grain to feed the horses. This meant quite an item to us, as we had 60 horses."

This same company reports the use of one 3 ton truck, displacing 3 teams delivering cast iron pipe and specials. One 2-ton truck displaces 3 teams, delivering 12 gas ranges and pipe fittings and meters at one load.

A 1-ton truck, on special delivery of ranges, etc., in a suburban district displaces 2 teams.

A 1-ton truck displaces 2 teams carrying men and meters in outlying districts. The ton trucks are used in the daytime by the gas department, returned to the charging station for exchange of batteries and are used at night on trouble work by the electric department.

The purpose of this paper is to deal largely with the type of car carrying 1 ton or less, because that size is better adapted to most of our work. The standard construction of the light delivery wagon is not so clearly defined as in the heavy type. Both the horizontal-

opposed, water-cooled engine, and the 2-cylinde, upright, 2 cycle engines, air cooled, are successfully employed. Both the sliding gear and planetary gear transmissions are used; also shaft and chain drive.

Some makers are seeking to introduce low cost machines, simple to operate, having only battery ignition, while others are copies after the high-priced machines, magnet and battery ignition, and need a trained operator. The general tendency, however, is to build a truck where the machinery is easily accessible with planetary gears, assembled on the chassis, so duplicate parts can be readily inserted and the truck kept on the road.

Both solid and pneumatic tires are used, and the shock absorbers should be installed to save tires and springs. Absorbers are especially necessary on the 1¾-inch solid tires, 40-inch wheels, used on the light delivery or express wagons, intended for suburban use, which operate with speeds from 15 to 30 miles per hour. There appears to be no end to the application of the motor truck. They are now largely used for all kinds of delivery service, and exclusively by one large department store in Philadelphia; by undertakers, fire departments, coal and lumber yards, sight-seeing stages, ambulances, gas, electric and telephone companies.

The mileage of the average truck per day runs as high as 75 on delivery of packages for stores, while not over 35 would be covered when used by workmen stopping to install fixtures, meters, etc. The costs are reported as follows:

One of our members, in a paper presented on this subject last year, reported the cost of a car (omitting depreciation) to be 3.98 cents per mile on a total of 7,356 miles. He reports the second year, including 20 per cent. depreciation, 16½ cents per mile on a total of 5,092 miles, making the average cost per mile for the 2 years about 10 cents per mile.

The average cost reported on the operation of from 15 to 20 cars, 1 ton capacity, by department stores, delivering over suburban territory from 50 to 75 miles per day, show the cost to be $6.50 per day, or a little over 8 cents per mile. This is exclusive of the driver, but covers the following items: Interest on investment, 5 per cent.; depreciation of car per year, 25 per cent.; gasoline used; oil used; tires and repairs to tires; repairs to car.

A guaranteed contract is furnished by the makers of a 1-ton truck, guaranteeing the expense of operating it for 1, 2 and 3 years, as follows:

Cost of operating two 1-horse trucks at $200 per month, including driver and depreciation, per year, $2,400. One model "H" truck will do the work of two 1-horse trucks. Truck costs $1,250.

Interest on investment at 5 per cent.	$62.50	
Driver at $12 per week	624.00	
Depreciation, 33⅓ per year	416.66	
Tires, one set all around, extra set on rear wheels	172.00	
Insurance, liability	75.00	
State license	5.00	
Gasoline, $.12; oil, $.46 a gallon	128.70	
Guaranteed maintenance includes storage in heated building, washing, polishing, daily inspection, wear out, all repairs and adjustments aside from accidents. Good driver. If car is disabled from any of the above causes, we furnish truck until such time as car is again in order without charge	450.00	
Cost of operating cars with guaranteed maintenance		$1,933.86
Saving over horses as above, first year		$466.14

MODEL "H" EXPRESS.

Profit at end of first, second and third years:

$466.14	Clear profit, end of first year car ⅓ paid for.
466.14	Clear profit, second year.
$932.28	Clear profit, end of second year, car ⅔ paid for.
346.14	Clear profit for third year.
$1,278.42	Total profit and car paid for, aside from value left in car.

It is understood that the guaranteed maintenance proposition is taken on at a figure of $450 a year, or $1.50 per day for the first two years; for third year an increase of $.40 a day, or $120 a year, is asked.

Another table of operating costs, given on 1-ton trucks, from past experience, is shown as follows: Operating cost per year of 1-ton truck, covering 30 miles per day. These figures are taken from cars in actual service:

Cost of car $1,250

	Per Year.	Per Day.
Interest on investment, 5 per cent.	$62.50	$0.171
Driver, $12 per week	624.00	2.00
Depreciation, 33⅓ per cent.	$416.00	$1.14
Repairs	150.00	0.41
Tires, a set all around, extra of rears	172.00	0.57
Insurance liability	75.00	0.25
State license	5.00	0.016
Gasoline and oil	128.70	0.42
Garage, $60 a year	60.00	0.165
	$1,693.20	$5.14
Two 1-horse trucks, $180 per month, per year	$1,800.00	
Cost of operation of truck	1,693.20	
Saving of	$106.80	

The following items of cost have come under the observation of the writer and are for a 30-horse power car of well-known make, operating during the year 1910:

	Total Cost.	Cost per Mile Run.
Gasoline, 568 gallons	$71.00	.01
Oil and grease	17.50	.0025
Tire renewals and repairs	92.89	.013
Repairs to car, carbide, batteries, etc	15.64	.002
	$197.03	.0275
If 10 per cent. depreciation is allowed	160.00	.022
Total	$357.03	.0495
Total mileage of the car.	7,100	

Another car of well known make shows the following costs:

	Total Cost.	Cost per Mile Run.
Gasoline	$47.88	.0139
Oil and batteries	7.50	.0022
Tire repairs	2.45	.0007
Repair to car	81.98	.0238
	$139.81	.0406
If 10 per cent. depreciation is allowed	90.00	.0261
Total	$229.81	.0667
Total mileage of the car.	3,444	

The following cost reported in the operation of a 3-wheel motor cycle, with receptacle in front of the driver for carrying lamps, glassware, etc.:

	Total Cost.	Cost per Mile Run.
Gasoline and oil	$32.38	.0036
Tire renewals and repairs	92.95	.0103
Repairs to motor	40.73	.0045
	$166 06	.0184
If 33⅓ per cent. depreciation is allowed	95.00	.0106
Total	$261.06	.0290
Total mileage of motor cycle	9,000	

The following table of costs is for operating a high-wheel express wagon with small solid tires, and the vehicle (of the type costing $750) shows the costly experience resulting from having inexperienced drivers to operate:

	Total Cost.	Cost per Mile Run.
Gasoline and oil	$56.12	.0363
Repairs to tires	34.48	.028
Repairs to motor	89.00	.0577
	$179.60	.1220
If 20 per cent. depreciation is allowed	150.00	.10
Total	$329.60	.2220
Total mileage of car	1,542	

The success that attended the use of the motor truck the past year has lead to the incorporation of motor service companies in various cities, who undertake to contract for delivery of packages for department stores. They show the following table of costs for delivering 1,500 and 2,000 parcels respectively, per day with 10 one-ton trucks.

1,500 parcels per day at an average of 11 cents per parcel	$165.00
26 days per month (income)	4,290.00
Income per month on 1,500 parcels per day	4,290.00
Total expenses per month for 10 trucks	2,638.40
Clear profit per month	$1,651.60
12 months per year	12
Clear profit per year on 1,500 parcels per day	$19,819.20

2,000 parcels per day at an average of 11 cents per parcel...	$220.00
26 days per month (income).....	5,720.00
Income per month on 2,000 parcels per day.....	5,720.00
Total expenses per month for 10 trucks.....	2,638.40
Clear profit per month.....	$3,081.60
12 months per year.....	12
Clear profit per year on 2,000 parcels per day.....	$36,979.20

These figures (all reliable) seem to prove conclusively that motor delivery is a greater success than most of us are led to believe, and that application for daily use is increasing very rapidly.

The author was greeted with a round of applause at the conclusion of his reading, and the President announced that Mr. L. S. Williams would open the

Discussion.

Mr. Williams—Mr. President, I hardly feel competent to discuss this paper intelligently. I have been very much interested, however, in the subject of motor trucks, especially as applied to the gas business. It seems to me a great advantage in the use of motor trucks would be the ability to give better and increased service. A motor truck simply displacing a team, if not kept steadily employed, would be rather an expensive proposition; but if sufficient work is given to keep it busy all the time it would seem, from the figures Mr. Dutton quotes, that it should be a good proposition. I would like to ask if Mr. Dutton has knowledge of what special construction they have for trucks in the gas business; whether a special, light delivery requires a top or any special type of body. Also, whether any experience has been had in the use of the small runabout in place of a motor cycle for light and quick delivery. That is all that I care to touch upon.

The President—The question is before you, gentlemen.

Mr. Frick—What sort of provision is made when a 1 or 2 ton truck replaces a wagon and 2 or 3 horses. Of course, there will be times when the truck is out of commission. It seems like carrying all your eggs in one basket. How can we get away from holding up the work very seriously or be put to quite a large expense in keeping up our deliveries? In considering horses it is entirely possible, but not at all probable, that all of them will be out of business at the same time; but granting one horse is laid up you are not put to very much expenses to replace it for the time being. But where you get "bent" on the truck delivery, which undoubtedly is the better plan to do, how can you overcome the embarrassment of not having that truck for a couple of days, possibly a week?

The President—Mr. Dutton, will you write these questions down as they are put and answer them all?

Mr. Dutton—I was wondering whether I would do that or whether I could remember them all.

Mr. Bains—We have been using a 2-ton gasoline truck since last June, at which time it had covered some 8,000 miles, averaging about 45 miles per working day. Some days it travelled as far as 100 miles. Having quite a long territory to cover, we found, as I think all works do, that, except in unusual cases, you must deliver your main material—say cast iron pipe—to one point. When you have to pipe a main some 8 or 10 miles from your plant, you can only get one load of pipe per team per day, but with a truck we have had 4 or 5 loads per day. With this truck we have had very little trouble. To begin with, in getting a truck to carry main material you must get one sufficiently long, and many of them are not long enough in the body. Our truck is 10 feet 6 inches body, meaning about 18 inches to 2 feet of cast iron pipe overhanging. This, which the truck manufacturer said would carry 4,000 pounds all right, the weight was too heavy on the rear wheels; in other words, the tires were too light, and we had to replace them with heavier ones. Noticing that it threw almost too much strain on the rear springs, we now have springs on the rear truck of the type they ordinarily have on 3-ton trucks. Features like these I think one has to work out. So far as the body is concerned, we have the regular, or what they call standard truck body, and with this type of body we carry all kinds of material, such as cast iron pipe, ranges; in fact, we do all classes of work with it. The 2-ton truck looks the ideal one for a gas company, because in it one can carry light material, whereas in the small truck one cannot carry heavy pipe. As far as Mr. Frick's question is concerned, it is one problem we are up against. We did away with 2 teams when we got the truck, and, of course, also did away with a very considerable amount of hiring extra teams for hauling pipe; but when the truck breaks down or needs repairs we are more or less up against it, for we have to go hire teams. One trouble we have had with trucks is the delay in getting repair parts. The truck, like any piece of machinery that is worked hard—and the truck is worked hard—is bound to break down. You are obliged to figure on a certain number of days per month to have that in being overhauled, which is annoying and expensive, and affects the work materially when the truck is laid up. Last week we went through an experience which left us without our truck a week through a leaky radiator—it seemed to me that that concern should have shipped me by express a radiator so I would only be laid up a day or two; but I was laid up a whole week. I will not say what it cost me for teams and loss of time in the week the truck was laid up. The natural solution is two trucks. Ours has cost us, including depreciation, about 14 to 15 cents per mile, exclusive of the driver's time, but including the portion of his time that goes to repairs on the car. In Mr. Dutton's figures he names $2 per day as sufficient wages for motorman; but in ordinary practice can you get a $2 a day man capable enough to operate a truck. We pay our man $2 75, which may be largely on account of location, where chauffeurs are in demand at $75 to $100 a month. That may be the reason. Our truck ordinarily has a helper, on account of the heavy material carried.

The President—As no other member seems willing to ask questions, I will ask Mr. Dutton to reply to the queries already in hand.

Mr. Dutton—Mr. Williams' first question concerning the type of light delivery truck seems a problem we all have to solve. I do not know that anyone has yet found it. We have four different types of cars, and only one of these did we accept as it was. The first one we expected to have trouble with—I did not believe it would stand up when we got it—is the high-wheeled International Harvester truck, which did not seem able to stand the work. They may be all right for a milkman delivering milk or the like, but they will not stand 10 hours a day in gas service—that is, the high-wheeled car, to carry about 800 to 1,000 pounds, having 1½-inch solid tire. If you buy a car of that type don't fail to put shock absorbers on it, because the men will run the car; you can't hold them down. The car is intended to operate 10 to 12 miles an hour, but in our district the roads are good and the territory covers 16 miles long by 10 miles wide (a community of 160 square miles to serve every day), they will "beat it up" 20 miles an hour. Thus they shake the top off and bolts, and shake the speedometers. I cannot keep the latter on the car. [Laughter.] I thought of putting on an electric gong at side of car so as to give the men warning when it was going over 12 miles an hour, but knowing the gongs would be shaken off I didn't install them. The next type of truck (we are trying it with quite a little more success than any other, and have been for the past 6 weeks) was an ordinary, 1911 Ford. We stripped the body from it and had built a light express body, about 8½ to 9 feet long, fitted with heavier shock absorbers than belong to that type of car. We have been running that with greater success and better economy than any of our other light trucks. It seems an ideal thing from lightness and speed. You can attain any speed you wish. The question is what repairs and depreciation will figure with it. Going out in the mornings, the foreman takes with this little express truck the light material and often 4 to 6 extra men, and it seems to be carrying them safely. We are also rebuilding an Atlas, 2-cycle engine which we have had 3 years, placing the same type of body on that car. We are building this especially for our own work, and it will be equipped with shock absorbers. We are using it to displace the small 3-wheeled, motorcycle. The latter is not fitted for country service and delivery of material. We had 2 of the 3-wheeled type of motorcycle last year, one of which was used by our street lamp renewal man on street lighting. The cost of operation I gave you was on the 3-wheeled machine for 9 months. It covered 1,000 miles a month on street lamp renewals, but we have not been very successful with the 3-wheeled motorcycle. We thought our distribution man could use a companion machine which was a trifle newer, with the result that it was in operation 2 and out of commission 7 months of the time. The two machines are identical, save that the one we had the least service from was a little more modern than the other. We tried it with 3 different men, with resultant failure as to success. It was a very costly experiment. This machine has been rebuilt and it is again in service for a month or 6 weeks. As to Mr. Frick's question of displacing 2 or 3 horses, while it is true that one machine displaces these, yet when the machine is down-and-out, or when a horse is down and-out you are only operating a third of the time on your work. Your truck can be down one third of the time compared with 1 horse, and as we have several trucks we fortunately had not more

than one of them down for any length of time. In the 7 cars which we are operating we have had no serious difficulty as to quick replacements of parts, even with the various types in service. Of course, the 2-cycle engine, with planetary gears, is practically foolproof; also, the Ford model with planetary gears is also almost foolproof. A man can learn to operate that in an hour. It is the type of machines we are installing, because of the trouble we had with the International, with its sliding gear transmission, a different type of gears. It travels fine, but on a down hill proposition, if a man should throw his lever out going down hill the whole engine is ripped to pieces. That happened the first week, in which time a man wrecked a complete engine on the car the first week we had it. It was out of commission 2 weeks. The engine had to be rebuilt in the car. I cannot answer Mr. Frick's question completely on that, because of the fact, as Mr. Bains said, we have not replaced all of our horses. We have 7 types of trucks and motor cars and still have 12 horses and wagons. We have the horses and wagons distributed for short hauls, but would rather use the trucks on our distance and quick service work. We not only are hoping to have a truck that will suit our purposes and displace the horses and wagons, but are trying to arrange our delivery of material so that the trucks will be used to deliver men, kept with a driver, so that they might go from town-to-town. Of course, our experience will fit very few of your conditions, and the application of motor trucks to delivery systems has altogether to do with local conditions. We are operating in 39 towns, and, of course, the distance and the time, perhaps, are things to be taken into account. We have not had a heavy type of truck because of the troubles we had with the light ones. Starting with light ones, trying to find out their weak points, we have been watching the heavier type of trucks. We want one or two 2-ton trucks, but have not been able to find anything that will exactly meet our conditions, and we are having built in our shops a gasoline truck, which we think will meet our conditions, that we expect to have in service within a week or more. It is nearly completed and has several features not in any of the stock trucks now on the market. I think all the builders of trucks, both light and heavy, are going through exactly the like transformation that the various types of motor cars went through when they were brought out. They have got to learn the business over, and apply the car to motor delivery or industrial purposes. The delay in getting parts I think I covered. We have different types of cars and have had no difficulty in getting repair parts very close. Tires for renewals are kept on hand. As to the cost of a man Mr. Bains referred to, we may have been fortunate. I have only one regular man operating a truck. The others are our own workmen, foremen or distribution men. We have a man who is quite an expert in motor truck work, whom we keep for all our repair work and the driving of one of the trucks. We were fortunate in being able to secure him for $60 a month. It is probably a pretty hard thing to find. We had like difficulty that Mr. Bains had in getting experienced men at anywhere near the price we feel we should pay. He lives in the neighborhood, and it is worth quite a little to him to stay at home and save his carfare going into the city or elsewhere. It is as cheap for him to live and work for us at $60 a month as it would be to go to the city and work for $75. I believe that covers all the questions asked. The matter of tires is one entering very largely into motor delivery. You will all save tires if you install shock absorbers, and I think you will save repair parts to the car. We have not given as much attention to shock absorbers, I think, as necessary. We have the most ideal conditions, I suppose, for roads, in the territory in which we use our cars; yet, with it all, the water-breaks in the road and various rough places we come across, on a heavy load, you are bound to get in trouble with your springs and tires, if these are not covered with heavy springs, as Mr. Bains suggested, with shock absorbers for vibration.

On motion a vote of thanks was passed to Mr. Dutton for his very excellent paper.

(To be Continued.)

THE Gas Machinery Company, of Cleveland, O., is under contract to install a plant of its improved water gas type, in the works of the Macon (Ga.) Light Company. The set is to have the dimension of 6 feet, and the apparatus is necessary to keep up the increase in send-out, which increase is in the main attributable to the well-directed business methods followed in Macon by Manager W. B. Redding. Mr. Redding has also planned other betterments of a general nature, which include sensible additions to the distributing system.

[PROCEEDINGS, FURNISHED BY THE SECRETARY.]

SEVENTH ANNUAL MEETING, IOWA DISTRICT GAS ASSOCIATION.

HELD IN LAFAYETTE INN, CLINTON, IA., MAY 24 AND 25.

FIRST DAY—MORNING SESSION.

The meeting was called to order by the President (Mr. Austin Burt) at 10 o'clock, the morning of the 25th.

ROLL CALL

showed that the following members were in attendance:

Averill, G. M,, Cedar Rapids.
Asendorf, C., Chicago, Ills.
Addy, Wm. B., Waterloo.
Ashton, A. J., Chicago, Ills.
Burt, A., Waterloo.
Bebb, J. F., Nevada.
Brown, E. D., Marengo.
Bertke, Wm. J., Sioux City.
Blackwell, H. C., Davenport.
Barrick, E. J., Kansas City, Mo.
Bowman, F. C., Chicago, Ills.
Clabaugh, G. W., Omaha, Neb.
Crawford, T., Clinton.
Clabaugh, A., Plattsmouth, Neb.
Chisholm, C.T., Kalamazoo, Mich.
Cressler, G. H., Fort Wayne, Ind.
Curfman, F. G., New York city.
Clark, J. C., Bridgeport, Conn.
Davis, Wm. E., So. Omaha. Neb.
Dunkle, C. C., Chicago, Ills.
Donelan, J. J., Waverly.
English, A. L., Council Bluffs.
Eustace, E. W., Dubuque.
Fair, C. W., Atlantic.
Forbes, J. W., Waterloo.
Grey, J. C., Omaha, Neb.
Green, G. A., Cherokee.
Goodale, J. C., Jr., Kalamazoo, Mich.
Griffin, H. L., Ames.
Grimm, C. H., Blaire, Neb.
Griffin, J. F., Oskaloosa.
Guitteau, W. S., Detroit, Mich.
Gondon, H. J., Chicago, Ills.
Hutchinson, W. P., Marion.
Haff, H. G., Des Moines.
Heavener, L. C., Sioux Falls, S.D.
Hoskins, H. A., Sioux City.
Hanson, C., Council Bluffs.
Jones, J. P., Cedar Falls.
Johnson, D. F., Perry.
Kellogg, L. L., Sioux City.
Kidder, F. A., Red Oak.
Kennedy, T. O., Lincoln, Neb.
Leaky, N. G., Detroit, Mich.
Litten, F. L., Iowa Falls.
Lucena, J., Omaha, Neb.
Lockwood, C. W., Clinton.
Leavenworth, M., Chicago.
McLean, G., Dubuque.
Mettler, L. B., Kansas City, Mo.
Maple, F., Boone.
Martin, E. H., Des Moines.
Maynard, H. B., Waterloo.
Meyers, J. A., Belle Plaine.
Miller, T. D., St. Louis, Mo.
Pratt, E. G., Chicago.
Potter, H. W., Burlington.
Parker, J. F., Rockford, Ills.
Parker, R. M., Fort Dodge.
Parkhill, B. F., Milwaukee, Wis.
Perry, J. A., Omaha, Neb.
Potter, J. L., Milwaukee, Wis.
Roper, G., Rockford, Ills.
Schall, H. D., Detroit, Mich.
Smyley, A. L., Chicago.
Steinmueller, E. W., Chicago.
Smith, C., Yankton, S. D.
Swan, G. L., Burlington.
Strain, J. R., Chicago.
Smith, H. N., Waterloo.
Tenney, C. I., Des Moines.
Tenney, D. C., Newton.
Vincent, G. I., Des Moines.
Walker, E. M., Muscatine.
Warnick, J. H., Omaha, Neb.
Weisgerber, E. C., Cedar Rapids.
Weber, F. C., Plattsmouth, Neb.
Winchell, S. A., Burlington.
Zahm A.W., Mason City.

The reading of the minutes of previous meeting was dispensed with, and the President introduced the Mayor of Clinton (Hon. Jas. C. Smith) who delivered the following

ADDRESS OF WELCOME.

Mr. Chairman and Gentlemen: The badge on my coat causes me to feel very much like a gas man. At the beginning of this, your Seventh Annual Convention, I believe it will not be out of place to congratulate you upon the assured success of this meeting. Neither do I think it will be out of place to congratulate your committee on arrangements, of whom that tireless and optimistic worker, Mr. Thomas Crawford, is Chairman. [Applause.] I esteem it a great pleasure and honor to welcome such a distinguished body of business men to our city, business men who are the peers of any other business men in this country; and, if the general public may be believed, are smarter than most business men. [Laughter.] In extending to you a welcome on behalf of the city of Clinton and her citizens I wish to emphasize the fact, that you are at present in the best and greatest city of Iowa; not the greatest perhaps, in point of population, but the greatest in ambition, and in the volume of welcome extended to you gentlemen who are our honored guests to-day. Our people have long enjoyed an enviable reputation for genuine hospitality and the art of making a stranger within their gates feel at home. I believe you gentlemen will realize the truth of these remarks before your convention is over.

I can well understand the great good in a business way that must accrue to all of you through these conventions, due to the interchange of thoughts and ideas and the discussion of ways and means of furnishing cheaper and better gas and of overcoming some of the difficulties and trials peculiar to your business; and while these matters in the main must be looked at from the viewpoint of ownership,

yet in the end the general public must be benefited by the discussions in your annual meeting together.

In conclusion, I ask you to make yourselves at home. Do and act as you please, and I assure you no harm will befall you. It is our pleasure and pride to have you with us to-day and to entertain you, and I hope that the memories you take away with you will be as pleasant as the memories you leave with us. [Applause.]

RESPONSE OF MR. WM. B. ADDY.

The President—Mr. Wm. B. Addy, of Waterloo, has kindly consented to respond to Mr. Smith's address.

Mr. Addy—Mr. President, your Honor: For several years the mayors of the cities in which this Association meet have received us with words which indicated kind feelings toward the gas companies. Our welcome to the city of Clinton, spoken by Mayor Smith, coming after these other expressions of goodwill, is especially appreciated at this time, for it seems to indicate a growing feeling on the part of our public officials that the public's interests and ours are the same. The truth of the saying that "A public office is a public trust," is recognized by our public officials to such an extent that the story of any exception is published from one end of the country to the other; and it is just as universally recognized by the officers of our public service corporations that they are servants of the public. No man can live for himself alone in this world and have the approval of his fellow men, and we all want that approval, whether we serve our fellows in the Mayor's chair or by furnishing them gas for heating, lighting and cooking. It is only a few years ago that the newspapers frequently published such little jokes about the gas men, and this is one I recently heard:

"'Twas the night before Christmas, and all through the house,
Not a creature was stirring—not even a mouse;
But down in the cellar, it could doubtless be found,
The gas meter still was running around."

Gradually people are learning that the gas meter can be relied upon, and that the gas companies want to be not only fair but generous. On behalf of this Association I want to thank Mayor Smith for the kind welcome which he extended to us, and I hope we may be able to settle any difficulties that we may have as easily as I am sure they could be settled if we were dealing with him.

The President then called for the

REPORT OF THE COUNCIL,

which was read as follows:

The Council of the Iowa District Gas Association met in Omaha, January 20, at 2:15 P.M. The following members were in attendance: Messrs. Burt, Fair, Clabaugh, Borden, Adams, Vincent, English, with Mr. Crawford as Chairman of the Committee on Publication of "Proceedings." Mr. Burt was in the Chair.

The matter of the printing of the "Proceedings" was taken up and discussed at length. The resignation of Mr. Vincent, as Chairman of the Committee on Printing, was tendered and accepted, and Mr. Crawford was appointed in his place, Mr. Vincent remaining the second member of the committee. Mr. Crawford was authorized to select the type for the printing, to cut out any discussion in the nature of repetition in the "Proceedings," to print therein a list of members of the past officers and the Constitution.

A hearty vote of thanks was tendered to Mr. Crawford for his energetic work in the premises. After discussion it was unanimously decided that the allowance of $150 for printing and proceedings was ample for the expenses.

Mr. Vincent reported that he expected to have the report on the "Uniform System of Accounts" ready for the May meeting; and, on motion, Mr. Borden and Mr. Albert Clabaugh were added to the Committee on Uniform System of Accounts.

The resignations of Messrs. Chubb, Bradford, Zimman and Crady was accepted.

The applications of the following were approved:

Active.

Butterworth, C.M., Council Bluffs.	Litten, F. L., Iowa Falls.
Kennedy, T. O., Lincoln, Neb.	Perry, J. A., Omaha, Neb.
Linton, S. E., Jr., Sioux Falls, S.D.	Warnick, J. H., Omaha, Neb.

Associate.

Hansen, C., Council Bluffs.	Pfeiffer, B. V., Omaha, Neb.

On motion, it was decided to hold the next annual meeting on May 24, 25 and 26, at Clinton, Ia.

A Committee on Arrangements was appointed as follows: Messrs. Thos. Crawford (Chairman), H. C. Blackwell and G. D. Roper.

The Finance Committee was appointed as follows: B. C. Adams (Chairman), H. C. Blackwell and A. L. English.

The following papers were assigned:

"Cokes and Oils for Water Gas Manufacturing," by J. H. Warnick, Omaha.

"Care and Maintenance of Water Gas Apparatus," by S. E. Linton, Jr., Sioux Falls.

"Gas House Terriers," by A. W. Borden, Hastings.

"Distribution Troubles," by E. M. Walker, Muscatine.

"Accidents and Damages," by J. B. Douglas, Philadelphia.

"Pressure Regulators," by G. A. Green, Cherokee.

"Inverted Lamps," by W. M. Blinks, Kalamazoo.

"Management," by G. W. Clabaugh, Omaha.

"Relations of Companies to Gas Associations," by A. W. Zahm, Mason City.

"Advantages of Employees' Clubs," by H. B. Maynard, Waterloo.

"New Business Development," by B. C. Adams, Lincoln.

"Why the Gas Man Should Educate the Public," by W. E. Davis, South Omaha.

There being no further business, the Council meeting adjourned, to meet in Clinton, Ia., the evening of June 13.

Subsequent to the Council meeting, and without direct authorization, a committee of two, consisting of Messrs. Haines and Vincent, was appointed to censor all papers. This committee takes the place of the committee of three Past-Presidents appointed for previous meetings.

Respectfully submitted, G. I. VINCENT, Secretary.

SUPPLEMENTARY REPORT.

The Council of the Iowa District Gas Association met at the Lafayette Hotel, Clinton, Ia., May 23, at 8 P.M. The following members were in attendance: Messrs. Burt, Clabaugh, Fair, Blackwell, Crawford, Vincent and Kennedy (proxy for Mr. Adams), Mr. Burt in the Chair.

Upon motion, Mr. Crawford was added to the Council to fill the vacancy left by the resignation of Mr. C. N. Chubb. The following applications for membership were received and approved:

Active.

Eustace, E. W., Dubuque.	Meyers, J. A., Belle Plaine.
Griffin, J. F., Oskaloosa.	Weisgerber, E. C., Cedar Rapids.
Johnson, D. F., Perry.	Smith, H. N., Waterloo.
Lockwood, C. M., Clinton.	Winchell, S. A., Burlington.
Lucena, J., Omaha, Neb.	

Associate.

Barrick, E. J., Kansas City, Mo.	Miller, T. D., St. Louis, Mo.
Bowman, F. C., Chicago.	Potter, J. L., Milwaukee, Wis.
Clark, J. C., Bridgeport, Conn.	Strain, J. R., Chicago.
Guitteau, W. S., Detroit, Mich.	Swan, G. L., Burlington, Ia.
Gondon, H. J., Chicago.	Yandall, W. R., Aurora.
Leavenworth, M., Chicago.	Weber, F. C, Plattsmouth, Neb.

The resignations of 12 gentlemen were accepted, and 3 were dropped for non-payment of dues.

The following communication from Mr. Geo. H. Waring, the Affiliation Representative of the American Gas Institute, was received and approved.

"CHARLESTON, S. C., May 20, 1911.

Council, Iowa District Gas Association: Gentlemen—As your Representative to the American Gas Institute, I beg to report the following:

No formal report was made to the American Gas Institute, but your representative promised that a paper would be prepared for the next meeting of the American Gas Institute on "Uniform System of Accounts for Small Gas Works."

The Directors appointed a member of the Iowa District Gas Association on the Nominating Committee. A paper was read at the last meeting of the American Gas Institute, by a member of the Iowa District Gas Association, and a member of the Iowa District Gas Association was honored by being appointed Chairman of the Bureau of Information; but, on account of pressing duties, it was necessary for him to decline this honor.

The next meeting of the American Gas Institute will be held very close to the territory of the Iowa District Gas Association, and it is hoped that the members of the Iowa District will avail themselves of

the opportunity of attending this meeting. The records show that there are now only 35 members of the American Gas Institute living in the territory of the Iowa District Gas Association, representing 25 cities. These are divided as follows:

26 from Iowa, representing 18 cities.
4 from Nebraska, representing 2 cities.
5 from South Dakota, representing 5 cities.

As I understand that the sentiment is to hold the next meeting of the Iowa District Gas Association at Lincoln, I hope that more Nebraska gas men will not only become interested in the Iowa District Gas Association, but will join the American Gas Institute.

I herewith attach a copy of a letter addressed to the Secretary of the American Gas Institute, advising him of the expiration of my term on May 23, 1911. Respectfully, GEO. H. WARING.

The suggestion that past officers, moving permanently from the territory should be elected to Honorary Membership, if qualified, was favorably considered.

A nominating committee (consisting of Messrs. Kennedy, Martin and Walker) was appointed.

The Secretary was instructed to send a printed copy of the proceedings to each of the Gas Associations in the country.

The papers as passed by the Censor Committee were approved and the programme as printed adopted.

ELECTION OF NEW MEMBERS.

On motion of Mr. Clabaugh the rules were suspended and the Secretary was directed to cast the ballat for the applicants, and the Secretary subsequently reported that the instruction had been carried out. On motion the reports of Council were received and placed on file.

ELECTED TO HONORARY MEMBERSHIP.

Mr. Clabaugh—Every man sometime in his life finds it a pleasant duty to say a good word for a friend. Such is my pleasure this morning. We have had with us for many years a man whom we all love and respect—a man who stanbs very high in this Association, who has always been at the helm and not only ready and willing to do his part, but to help along the man below him. That man has left the State, probably never to return; and we want him to feel that he has carried with him the gratitude, love and devotion of this Association wherever he may make his home. Gentlemen, I speak of Mr. George H. Waring, our late President, now located in Charleston, S. C.; and, as a compliment to him, and a reciprocal one to us, I move he be elected an honorary member of this Association. [Applause.]

(Seconded by Mr. Addy and carried unanimously.) On motion of Mr. Maynard, the Secretary was instructed to send a telegraphic announcement of his election to Mr. Waring, and with it the felicitations of this body.

The President—We will now listen to the report of the Secretary-Treasurer.

REPORT OF THE SECRETARY-TREASURER.

The Secretary-Treasurer presented and read the following reports for 1910–11.

To the Members of the Iowa Gas Association: The work of your Secretary during the year 1910–11 has followed along the general line of previous years. In accordance with past custom, invitations to attend this meeting were sent to the Secretaries of all the Gas Associations in the country and cordial acknowledgments were received from all.

Your Secretary followed up to some extent the work of the Membership Committee, by writing personal letters to a number of the gas men in the territory who are not members of the Association, having endeavored to reach these men through mutual acquaintance. Several applications were received as result of the correspondence.

Your Secretary wishes to acknowledge the very valuable and able assistance received from your Chairman of the Committee on Arrangements, Mr. Thomas Crawford.

During the year the following applications were received and approved by the Council:

For active membership 15
For associate " 14

During the year 16 members resigned (all through leaving the territory of the Association) and 3 members were dropped for non-payment of dues.

The total membership is now 91 active, 50 associate and 1 honorary, a total of 142 members.

In conclusion, your Secretary wishes to call the attention of the Association to the very gratifying and healthy growth of the Association. At the first meeting held in Des Moines there were present (members and guests) 33 in all. We believe we are safe in estimating that the attendance at the present meeting will exceed 150.

Respectfully submitted, G. I. VINCENT,
Secretary-Treasurer.

As Treasurer, Mr. Vincent reported a cash receipt of $724.83, an expenditure of $454.35, and a balance of $270.48.

On motion of Mr. Bertke the reports were approved and ordered placed on file.

TELEGRAM FROM MR. STANNARD.

The Secretary read the following telegram from the President of the National Commercial Gas Association:

DENVER, COL., May 23, 1911.

Mr. Austin Burt, President, Iowa District Gas Association, Lafayette Inn, Clinton, Ia.: The National Commercial Gas Association sends greetings to the Iowa District Gas Association. We wish you a very enjoyable and interesting convention, and heartily and cordially invite the members of your Association to attend the next convention of the National Commercial Gas Association, to be held in Denver next October. CLARE N. STANNARD, President.

The reports of the Finance Committee and the Committee on Printing "Proceedings" were put over. The

REPORT OF COMMITTEE ON MEMBERSHIP

was read by Mr. Fair, as follows: The Committee begs to report that it has been successful far beyond its most sanguine expectations as to increasing the membership of this Association, and our success is due entirely to the characteristic efforts of Mr. Maynard and Mr. Borden.

A WORD FROM MR. WARING.

The Secretary—Here is a postal card from Mr. Waring, addressed to Mr. Fair: "Sorry I can't be with you; best wishes to you all. Hope to see you in St. Louis, in October.—GEO. H. WARING."

PLACE OF NEXT MEETING.

The President—The question of place of next meeting would be a good one to now discuss. Are we to have any remarks along that line?

Mr. Clabaugh thought it would be well to wait until Mr. Kennedy arrived. Mr. Adams wrote him a day or two ago, stating that his hope was that the meeting would be held in Lincoln next year. He invited them there last year, you may remember. Mr. Clabaugh guaranteed a most cordial welcome if they should select Lincoln. They could take care of them very well, and as the Association only met once in Nebraska, he thought it would be well to favorably consider Lincoln.

The President remarked it was simply an informal discussion, as the Council had the determining of the place, they could, however, offer views on the matter.

Mr. Kellogg seconded Mr. Clabaugh's suggestion in respect of the desirability of holding the next meeting in Lincoln. It would interest a good many Nebraska people not now members of the Association.

On the invitation of the President, Vice-President Clabaugh assumed the Chair, and President Burt read the following

INAUGURAL ADDRESS.

To the Members, Iowa District Gas Association: Seven years have passed since a small company of gas enthusiasts met at "The Annex" in Chicago and organized this Association. Each year has seen in it a steady and healthful development, until to-day our Association ranks well to the front of the energetic affiliated Associations. Out of a total of 82 standard gas companies in our district, 61 are represented in the Association. We have as members 87 active, 39 associate, and 1 honorary at the present time.

The great American Institute and the National Commercial Association, with their enormous membership rolls and extensive territory, have their legitimate place in the economy of affairs and are invaluable in the work they accomplish for the industry they represent.

The splendid benefits of these great organizations, however, are very often far out of reach of a large percentage of the gas fraternity;

a body of men who are no whit less energetic and enthusiastic in their efforts towards the upbuilding of the gas industry. It is to this body of men that our local District Association appeals, and to whose splendid efforts the success of the Association largely depends.

There seems a decided tendency recently to segregate the large Associations into sections or departments and even independent organizations, the aim being apparently for the technical and commercial elements to pull apart. One is led to wonder where it will all lead. It seems to me there is serious danger in the mania for new organizations. Useful energy and enthusiasm may become so dissipated as to serve no good purpose whatever.

Do not misunderstand me. I have no word of disapproval for the splendid efforts put forth by those who honestly desire to bring about improvement along any line of endeavor; but I do wish to emphasize the necessity of making the most of the organizations we already have and thus secure the highest efficiency and greatest benefit possible.

I firmly believe it is a fine thing to bring the commercial and technical men together, as our Association does. The technical man is apt to become "chesty," and think the whole works depend on him, and that if it were not for his efforts there would be chaos at once. It is salutary for him to realize that the commercial man is just as important in his place, and really is the one who makes it possible for the technical man to retain his position any length of time.

On the other hand, the commercial man has an excellent apportunity to come down off his high horse and note the fact that, if the technical man were not everlastingly on the job, there would very shortly be nothing to sell; and nothing to sell is the commercial man's clearest notion of ruin. There is more than a suspicion existing in my mind that the great advance being made in the development of the gas industry everywhere is very largely due to the fact that the commercial man is better technically and that the technical man has greatly improved commercially.

A review of the past year reveals many questions of serious import to the gas industry, and none more so than the agitation for lower rates. It is not one of the virtues of the average politician to look upon a gas company as law abiding or entitled to as much consideration as any other mercantile organization. No legitimate reason can be advanced to show that pernicious political interference should not be resented and resisted to the limit by every reasonable means at the command of those entrusted with the protection of the investment and best interest of the property. One of the strongest and surest safeguards against the rapacity of unprincipled politicians is a fearless, liberal public policy on the part of the company.

It has been truly said that the public is our employer, and we surely should not render less in this capacity than we would expect from those whom we employ. I am firmly convinced that the pendulum of political unrest has swung to the extreme limit and is now fairly on the return. We will soon have plenty of evidence of a more sober judgment and fairer treatment on the part of those who have the power to make or break us. People are surely getting a grip on themselves, and the days of a safe and sane prosperity are not far distant.

The Association is to be congratulated over the successful completion of the work of publishing the "Proceedings," and the appreciation of the Association should be most heartily extended to Mr. Thomas Crawford for his untiring efforts in this work. Provision should be made at this session for carrying out the publication each year henceforth.

The programme this year is unusually broad and will be found particularly practical and helpful. Especial attention is called to the Report of the Committee on "Uniform System of Accounts for Small Gas Companies." The aim has been to make this report so complete and practical that the smaller Companies would find no difficulty in putting it into effect at once.

On the recommendation of President Waring last year, a Committee on Public Relations has been appointed and its initial report will be awaited with interest.

The *Programme* is the *Body* and *Discussion* is the *Life* of these meetings. Let us have the benefit of your experience and ideas. Be prompt; be brief. If you cannot be brief, be as brief as you can.

You will pardon a reference to one point where many meetings of this kind become a flat failure. That is in the prompt attendance at the opening of each session. We all know from experience in our business that to meet an appointment on time requires just a little definite planning. So with this, just plan a little and be in your seats ready to open the session on time. It will pay you and make our work easier.

Vice-President Clabaugh appointed Messrs. L. L. Kellogg, Geo. McLean and Geo. O. Carson a Committee on President's Address.

(To be Continued.)

Management and Commercial Methods.

PRACTICAL EXEMPLIFICATIONS IN THE USE OF GAS FOR FUEL AT SCHENECTADY, N. Y.—The handsome building and showroom described in the JOURNAL, dated June 5, 1911, have been a source of considerable benefit to the commercial department in pushing gas in the industrial as well as the lighting field, since many of the large gas consuming appliances can be shown in operation.

An "All Gas Kitchen" is shown in Fig. 1, and it is at work in one

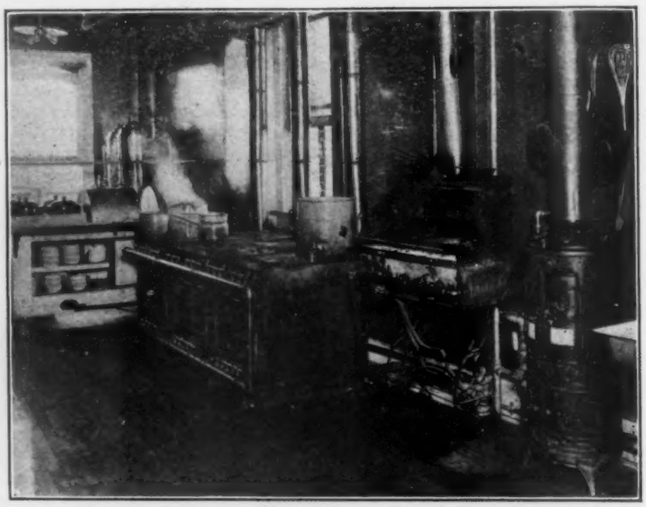

Fig. 1. An "All Gas Kitchen."

of the busiest and largest department stores in the city. It consists of an automatic water heater, a horizontal broiler, with grill 14 inches by 28 inches, a 3-section, closed top hotel range, a 6-foot steam table and 2 coffee urns. The dish warmer under the steam table has doors on one side only. Experience has proven that, if a steam table stands so access can be had to both sides, it is much better to have the doors on each side of the dish warmer, as hot dishes can be reached by the waiters and servants without interfering with the persons carving. This type of gas broiler has been used for about 4 years, and it gives good results.

The Weber Electric Company, a concern employing about 200 people, is engaged almost exclusively in the manufacture of high-grade electric sockets and fuses. Its factory is on the outskirts of the city, and when the question of supplying gas was brought up the nearest main was 4,000 feet distant, and the intervening territory was only sparsely settled. However, it was deemed good business to make this extension to forestall the employment of oil, since a manufacturing concern once going to heavy expense in installing an oil burning equipment it is difficult to dislodge this system.

It has been possible to install a lead and cyanide-hardening furnace, shown in Fig. 2. A soft metal furnace, ribbon burner, 2 small forges, and potash and hot water cauldrons. It was also gratifying to note that an electric concern could be convinced of the superior merits of gas lighting, as the office and machine shop are now lighted by this method, and an emergency service is supplied throughout the remainder of the factory, while all the equipment is electrically driven.

Two large furnaces (shown in Fig. 3) are used by the American Locomotive Company for hardening milling cutters, dies, drills, taps and reamers, which are made and used by the Locomotive Company in large quantities.

The large oven, shown in Fig. 4, having a capacity of 192 two-pound loaves of bread, has been in operation for about 4 months, being used for all kinds of baking and roasting, although used most of the time for baking bread and rolls. It is giving excellent satisfaction, supplying a lunchroom and restaurant, also a large retail

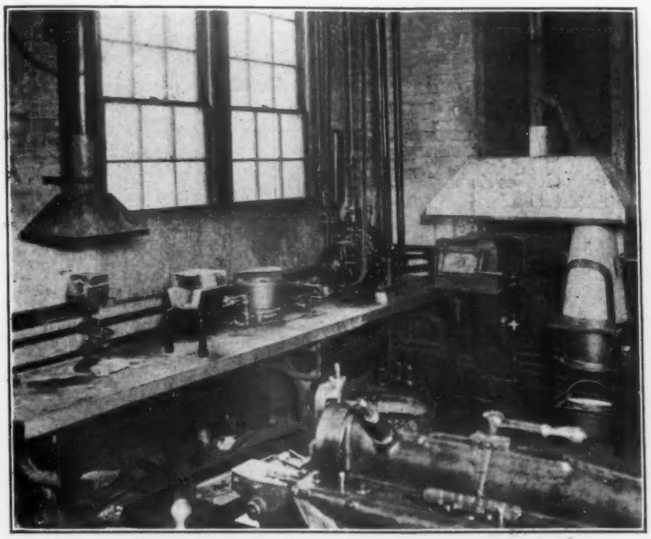

Fig. 2.—Factory of Weber Electric Company.

Fig. 3.—Factory, American Locomotive Company.

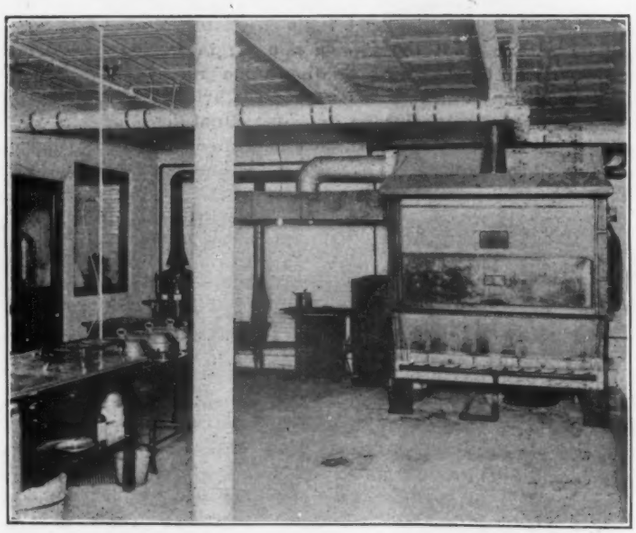

Fig. 4.—Restaurant Baking Oven and Smaller Appliances.

trade. It is located in the basement of one of the city's largest stores, a lunchroom being run in connection with the bakery. A portion of the lunchroom kitchen equipment is shown in the picture, including a No. 6 automatic water heater, an 8 foot steam table, a confectioner's stove, small gas range, coffee urns and a 2-section hotel range. The restaurant, on an upper floor of this store, contains a 2-section hotel range, 28-inch broiler, water heater, coffee urns and a steam table.

A portion of the kitchen of the busiest lunch room in the city is shown in Fig. 5. Owing to the arrangement it was difficult to get a

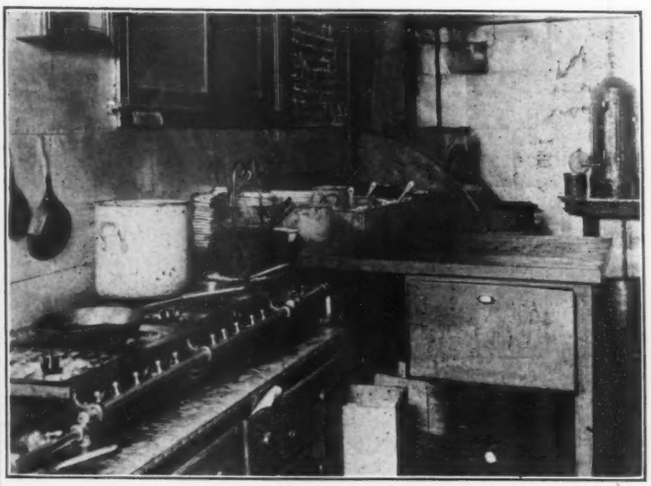

Fig. 5.—Kitchen of the "Busiest" Lunch Room.

good picture. It shows a large cake griddle, an 8-burner range top, an oyster cooker (also used for cooking French fried potatoes) a 2-section hotel range and a portion of the battery of coffee urns. This restaurant also contains 2 smaller gas ranges, as well as other gas consuming appliances.

Recent Patent Issues.

Prepared for the AMERICAN GAS LIGHT JOURNAL by ROYAL E. BURNHAM, solicitor of patents and counselor in patent causes, 833 Bond Building, Washington, D. C., from whom illustrations and specifications of any patent mentioned below may be obtained for 10 cents.

994,135. Gas Generator. G. M. Eckels, Mechanicsburg, Pa., assignor of one-fifth to F. E. Wilcox, one-fifth to H. C. Brown and one-fifth to L. E. Hickok, same place.

994,140. Gas Lighting and Extinguishing Apparatus. E. H. Elton and R. Stephens, Clevedon, England.

994,164. Igniter for Gas Burners. J. Jergle, Karl Machal and J. Heller, Vienna, Austria-Hungary, assignors to F. Hamburger and A. Urban, same place.

994,282. Apparatus for Separating Solid Particles from Gaseous Fluids. E. G. Spilsbury, New Rochelle, N. Y., assignor to Just Process Company, Syracuse, N. Y.

994,315. Treatment of Gases Given Off in the Destructive Distillation of Coal, etc. G. Hilgenstock, Dalhausen-Ruhr, Germany.

994,369. Method of Treating Distillation Gases to Produce Illuminating Liquefied Gas. H. Blau, Augsburg, Germany, assignor to Blaugas Company of America.

994,390. Saturating Means for Gas Producer Systems. C. A. Harvey, Chicago, Ills., assignor to Producer Gas Utilities Company.

994,533. Gas Cooking Stove and the Like. W. H. Pirrie, Battersea Park, London, England.

994,585. Circuit Controlling Apparatus for Electric Gas Burners. E. A. and E. N. Frary, South Deerfield, Mass., assignors to Acetylene Constructian Company, Hartford, Conn.

994,670. Means for Controlling the Supply of Gas to Gas Burners and for Igniting the Same. A. Georgi, Florence, Italy.

PUBLICATIONS.

Report of Massachusetts Board of Gas and Electric Light Commissioners.—This is the 26th annual report of the Board of Gas and Electric Light Commissioners of Massachusetts, and contains all opinions and data collected by the Board during 1910. Copies can be obtained from the Commissioners, at Boston, Mass. Later on this valuable work will be properly reviewed.

Tips.—This is the title of a monthly bulletin, circulated by the Allentown (Pa.) Gas Company among its employees, and carries mat-

ter which is prepared by them. The articles are of good elementary structure, and have proven quite a stimulus to the employees, through causing them to take an active interest in their routine duties. This publication is a credit to the men, and is of much worth to the Company.

Gas Company Circulars, U. G. I. Co., Philadelphia, Pa.—The numbers of the second set of colored circulars, issued by the United Gas Improvement Company, are now being distributed. They cover the use of gas for fuel purposes, the first set portraying the use of gas for lighting. The compilation is first-class, the get-up is irreproachable.

Co-Partnership Journal.—A monthly publication from the press of the South Metropolitan Gas Company, London, England. The May issue contains a number of articles which should be of great benefit to this huge corporation, by increasing the interest and loyalty of the Company's army of employees.

Commercial Illumination.—A recent pamphlet, at the instance of the Welsbach Company, Gloucester, N. J., artistically shows the various types of lamps manufactured by this Company, with many graphic illustrations of installations. The matter is arranged in a handsome and attractive manner, and a copy thereof should be in the hands of every gas man.

Electric Commercial Development.—This is the title of a pamphlet issued by the Electric Bond and Share Company. The matter has been prepared for general distribution and contains much interesting historical data as well as tabulation figures reciting the present status of the industry.

Public Service Commission Opinion.—The opinion of the Public Service Commission, Second New York District, a narration concerning the consolidation which makes up the Central-Hudson Gas and Electric Company, previously referred to in the JOURNAL.

Items of Interest
FROM VARIOUS LOCALITIES.

"BULLETIN G.," is the first of two messages recently issued by the "Precision Instrument Company, of Detroit, Mich. It has mainly to do with an illustrated description of Boland Wild's calorimeter, which apparatus is of the sodium-peroxide type. The "Bulletin" effectively tells the story of the apparatus, which certainly has a goodly lack of involution to recommend it. "Bulletin H," also nicely illustrated, details again the undoubted virtues of "Carpenter's Metropolitan Argand Burner No. 2," the test burner specified for the official use in London by the Gas Referees, as per their notification of 5 years ago.

THE American Gas Light Company, of Kalamazoo, Mich., is responsible for the issuance of an up-to-date appearing booklet, bearing the title of "American Miniatures," showing those in combination with different kinds of glassware. Write the proprietors, as per above address for an example.

ANOTHER effective advertising sheet, showing full lines of the many specialties on gas construction and apparatus lines, manufactured by that conservative firm, is to hand from the Lloyd Construction Company, of Detroit.

ALL the bids that were submitted to the authorities of Escanaba, Mich., in connection with the proposed construction there of a municipal gas plant, were rejected. Our informant adds that the "reason" given for the rejection was that none of them conformed to the specifications. We do not know who prepared the aforesaid specifications, but we do know that the authorities are letting themselves out in the remark, "It was also decided to have a new set of plans and specifications prepared, the members of the Board believing that it would be advisable to accept certain suggested changes." Of a certainty it would. The new plans are being prepared with a view to having the same ready for the inspection of bidders the last week in June, with a further view of having the bid figures in hand on or before July 3d.

"T. R. V.," forwards the following from Montreal, Canada, under date of the 8th inst.: "Notwithstanding the fact that the Montreal Light, Heat and Power Company reduced its rates for electric and gas service on May 1, 1910, the Company during the fiscal year ended April 30 last established a new high record of gross and net earnings, and showed the largest percentage earned on the outstanding capital stock in its history. After deduction of all expenses and charges for the 12 months, the balance available for dividends was equal to 12.37 per cent. on the $17,000,000 capital stock, as compared with 11¼ per cent. in the year previous, and 10¼ per cent. in 1909. The ratio of expenses to gross revenues for the period was the smallest on record by a very substantial margin." So much (a very much it is) for the Holt-Norris-Mann confederacy.

MR. M. E. MALONE, in charge of the coke division of the business of the Denver (Col.) Gas and Electric Company, is to the fore with the announcement that, between the 1st inst. and September 1st, the rate for coke delivered in any part of Denver proper will be $4.50 per net ton. During the other months of the year the Company readily gets $5 per ton.

AT the annual meeting of the Ocean City (N. J.) Gas Light Company the officers elected were: President, A. P. Maloney; Vice President, A. H. Osborn; Treasurer and Secretary, L. C. Ritchie.

THE Rome (N. Y.) Gas, Electric Light and Power Company, which is controlled by Messrs. J. T. Lynn and associates, has amended its by-laws, directing that the Board of Directors hereafter consist of 7 members instead of 9.

"W. B. R.," writing from Burlington, Ia., under date of the 7th inst., says: "I failed to note any mention in the JOURNAL for this week of the changes recently made in Washington, this State. A special election was held there some days ago, which resulted in an affiirmation of the recommendation made by council that the franchise of the Washington Gas and Electric Company be extended for another period of 20 years. The vote was: In favor, 362; against, 139. The Company was desirous of getting the extension in order that it might place a bond issue on the property, to reimburse it on account of important extensions made in Washington. I should have said that the applicant was in reality the Iowa Gas and Electric Company, which controls the Washington corporation—in fact owns it. The parent concern is considering the advisability of going into another operation along gas lines in the State; and if this comes to a head I will post you."

F. M. GRAY, writing from Baltimore, under date of the 10th, incloses this: "The Public Service Commission of Maryland, after a thorough investigation into the plant of the Easton Light and Fuel Company, issued last Monday an order requiring the Company to make a number of changes and additions in its system. Not only did the Commission take much testimony concerning the Company and its products, but the Commission Engineer, Mr. Charles E. Phelps, made a thorough examination. The order is regarded as one of the most important that has been given by that body: 'The installation of apparatus for the improvement of the quality of gas is ordered, as is other apparatus, to gauge more accurately the gas pressure and output of the product.' Continuing, the order says: 'In order to insure prompt compliance with the foregoing, said Company shall, within 10 days after the receipt of this order, notify the Commission in writing whether the terms of this order are accepted and will be obeyed, when, in the event of acceptance and tender of compliance, an inspector of the Commission will be directed to be present and superintend the making of said additions and repairs, and when the same are completed said Company shall make a full and detailed report to the Commission.'"

ADVICES from Madison, N. J., state that a majority of the members of the Council had agreed to ask for a public vote on the gas question, which matter has been continuously before the public for a twelvemonth. It is said an election will be held shortly (in fact, the 16th inst. might be the day) to determine whether the people are in favor of granting the Public Service Gas Company a 50-year franchise to pipe the district and furnish gas thereto on a basis of something like $1 per 1,000. To offset this movement a band of enthusiasts are favoring the plan of issuing bonds in the sum of $100,000, the proceeds to go towards constructing a municipal gas plant. Still a third bunch of federalists, while leaning towards the municipal operating scheme, are holding that the time is not ripe for such an undertaking until the finances of the place are in sturdier shape. The third party also declares that purchase of gas from an outside corporation would "greatly endanger" the operating of the present

municipal electric lighting station, as to sales of current and the like. In which contention the utterers are undoubtedly correct.

MESSRS. BURRELL TRIPP, of Allegan, Mich., and A. C. Runyan, of South Haven, Mich., are strong in their contention that the latter named place is in need of a gas plant, and are further contending that $20,000 will be all that is necessary to establish an up-to-date plant. There can be no doubt that South Haven's condition as a going ahead settlement would be bettered were a gas plant to be constructed "in its midst;" but, if our memory of the place serves aright, due consideration being given to the difficulties consequent upon main laying in that section, the sum of $60,000 would be nearer the mark, provided the initial distributing system called for a main mileage equal to seven.

MR. MORRIS TRACY, Secretary of the Penn Yan (N. Y.) Gas Light Company, was united in marriage to Miss Helen M. Nichols, of Bellona, N. Y., at noon of the 7th inst. May they ever happy be.

HOLDERS of Oberlin (O.) Gas and Electric first mortgage bonds are being asked to communicate with Messrs. Hayden, Miller & Co., of Cleveland, who represent a committee to protect the rights of Oberlin holders of the bonds, while the Company's intricately mixed-up affairs are being adjusted.

THE new generator house of the Austin (Tex.) Gas Light Company is to be located between Third and Fourth streets and San Marcos and Medina streets. It is to be a structure of brick and steel, and the estimated cost is $12,500.

MR. HENRY W. CHASE, of the Union Gas and Electric Company, Cincinnati, O., has been appointed to take charge of the new business division of the Binghamton (N. Y.) Light, Heat and Power Company.

THE Town Councils of Delmar, Del., and Delmar, Md., as the result of a ballot in joint assembly, have adopted an ordinance under which the Home Gas Company, of Salisbury, Md., will supply gas to the first named places early this fall. No works will be needed on manufacturing account, as the gas will be sent under pressure from the Salisbury works.

NEWS despatches from Bristol, Pa., are to the effect that early this month two tows of canal barges—each of 6 empty boats—were sent through the Canal on a trip to Easton, drawn by 2 new gas impelled motor boats instead of the usual complement of mules. On the deck of the boat sets a cylindrical hopper of cast iron, which is filled with pea coal, and the furnace arrangement under the hopper is fed with fuel and the latter is ignited. The resultant gases are purified in rough way, the current going into the cylinders for immediate use. It is said that repeated trials of this producer gas application have resulted in the propelling of a canal barge at the rate of 5 miles an hour, as against 2 miles with mules. Further, that the system does away with all danger of washing out the canal banks, which heretofore has been the stopper to the use of boats propelled by steam methods.

HERE is the way in which the Haverhill (Mass.) *Record* summarized the testimony submitted by Alton D. Adams, "professional gas expert," during one cross-examination of that party, in the hearing before the Massachusetts Board of Gas and Electric Light Commissioners, over the petition to order the Haverhill Gas Light Company to reduce its selling rates: "Attorney C. H. Tyler for the Gas Company tied bowknots in the testimony previously given by Expert Engineer Adams. Expert Adams admitted that his statements and figures were not based on thorough investigations of the gas plants in this city and Fall River. The expert also was forced to admit that his statement that the local Company had increased the pressure in the mains, to the detriment of consumers, was wrong in his original testimony, according to the charts furnished by the Company. Attorney Anderson for the city chafed at the cross-examination of his expert and objected to a great many questions put to Adams by Attorney Tyler. Very few of his objections were sustained by Chairman Barker, however."

MR. MICHAEL SWEENEY has resigned his position with the Worcester County (Mass.) Gas Company, in order to assume the place of Assistant Superintendent of the distribution division of the Fitchburg (Mass.) Gas and Electric Company. Prior to his going from home he was the guest at an impomptu dinner party given by some of his associates in the Worcester corporation.

"W. T. R.," in a message from Bridgeport, Conn., dated the 12th inst., says: "The records of Tax Collector Donnelly, of this city, rather go to show that the 'old reliable' institution known as the Bridgeport Gas Company, is entitled to the respect of the community, for its contribution to the general weal of Bridgeport, in the shape of a check for taxes for the year, amounted to the snug sum of $21,410.15. There is never any trouble in collecting the Bridgeport Company's 'dues,' even though its owners occasionally give utterance to the thought that the assessors eyes occasionally see double, when he is adjusting assessable values on their account."

ON the 6th inst. articles incorporating the Cleveland-Rector Gas Light and Heat Company were filed with the Secretary of State, Dover, Del. Its specified purposes are the manufacture and distribution of gas, to bore for oil, etc. It is capitalized in $200,000, and its incorporators are: Jno. L. Moore, Pittsburgh, Pa.; W. H. Hampton, Kattalla, Alaska; H. W. Davis, Wilmington, Del.

THE United Gas Improvement Company has arranged for an extension of its distributing system to and through the outlying district known as Elmwood, the supply for which will be drawn from the Clearview holder station. The extension means a considerable expenditure, for a good length of the way is through rock. However, the Company is sure to get a substantial return on the investment, for it will enable the hooking up of 1,200 families, all of whom will figure as good gas users.

"A. L. V.," writing from Saginaw, Mich., under date of the 9th inst., incloses the following: "The so called 90-cent gas rate, which will benefit over 8,000 consumers—practically all of those served by the Saginaw Gas Company—became effective Thursday week last, becoming operative under the provisions of an ordinance passed the closing days of 1908, as provided by the terms of a 30-year franchise, dating back to December 31, 1908. The new rate will take effect on bills contracted hereafter, so consumers will experience the benefit of the concession on accounts presented July 1st. The superseded rate was $1.15 per 1,000 cubic feet, with a discount of 20 cents per 1,000 on bills paid within 20 days from presentation. Manager T. F. Hepburn—and a very 'smooth' person he is—in announcing through the local press the concession, remarked: 'This new rate, of course, amounts to a reduction of 5 cents per 1,000, and it will affect practically all of our consumers—8,000 in number. This is proof that the proprietors of this corporation always keeps faith with the people of our city. Further, that it stands practically for advancing the growth of Saginaw—a determination, of course, not altogether based on strictly ethical grounds.' The following further figures in this connection will likely prove of interest. The franchise of the Company provides for the price or determination of the price for the full period of the grant or 30 years of its life. From December 31, 1908 to June 1, 1911, the price was fixed by ordinance at $1.15, or 95-cent gas with the discount. For the next decade (1911-1921) the rate is fixed at $1.10, or 90 cents with the discount. For the next ensuing decade (1921-1931) the rate may be fixed, changed and determined by 5 disinterested persons, and for the 7 years from June 1st, 1931, to the like date in 1938, or the expiration of the franchise, the rate shall be fixed in the same manner by an uninterested commission, according to the ordinance."

MR. T. A. DALEY, incloses the following from Brockton, Mass., under date of the 8th inst.: "Dear JOURNAL—I see that the gas man's paper (meaning yourselves) is not adverse to reporting occasionally something that happens along the lines of promotion to a good fellow, who may not be either a regular or irregular engineer. So I make bold to say to you that hearty, big, good-tempered 'Jim.' Mullins, for the last 10 years head foreman for the Brockton Gas Company, leaves us to-morrow to join Mr. J. E. Philbrick's bunch at York, Pa. Just before he left work to-day his partners surrounded 'Jim.,' and while one of us was telling him how much we would miss him, another slipped a purse, the bulging of which was caused by the pressure of gold coins within. Poor 'Jim.' did not know exactly what to say in return, but his eyes grew misty and his tongue seemed to stick. But 'Mike.' Ryan brought 'Jim.' too with the remark, 'Never mind, my lad; we'll give you a send-off that won't be altogether dry around at the Missus' house in Ward street to-morrow evening. Perhaps you'll have found your speech by then.'"

SOME are saying that the Boston Consolidated Gas Company will purchase the Masonic Temple property (Tremont and Boylston streets) and remodel or reconstruct the same to serve as suitable office quarters, and others are positive that a different site will be chosen. It is not likely, though, that any positive step will be taken until President Richards returns from his auto trip abroad. Meanwhile it may be germane to note that the Masonic is assessed for purposes of taxation at $1,340,500.

THE AMERICAN GAS LIGHT JOURNAL

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MONDAY, JUNE 19, 1911.

The Market for Gas Securities.

The market for gas securities has been as devoid of interest as has that for general offerings. Prices about the same as they were a week ago.

The announcement that Prof. E. W. Bemis is to investigate the figures presented in the Hagenah report, respecting the Peoples Company, has not affected the price of their shares.

Gas Stocks.

Quotations by George W. Close, Broker and Dealer in Gas Stocks.
115 BROADWAY, NEW YORK CITY.
JUNE 19.

☞ All communications will receive particular attention.

☞ The following quotations are based on the par value of $100 per share:

N. Y. City Companies.	*Capital.*	*Par.*	*Bid.*	*Asked*
Consolidated Gas Co.	$73,177,000	100	146	147
Central Union Gas Co. — 1st 5's, due 1972, J. & J.	3,000,000	1,000	103	105
Equitable Gas Light Co.— Con. 5's, due 1932, M. & S.	1,000,000	1,000	115	118
Mutual Gas Co.	3,600,000	100	155	165
New Amsterdam Gas Co.— 1st Con. 5's, due 1948, J. & J.	11,000,000	1,000	100	101½
New York & Richmond Gas Co. (Staten Island)	1,500,000	100	35	50
1st Mtg. Gold Bds. 5 p. ct.	1,000,000	—	98½	100½
New York and East River— 1st 5's, due 1944, J. & J.	3,500,000	1,000	103	105
Con. 5's, due 1945, J. & J.	1,500,000	—	95	100
Northern Union— 1st 5's, due 1927, J. & J.	1,250,000	1,000	94	100
Standard	5,000,000	100	59	70
Preferred	5,000,000	100	70	100
1st Mtg. 5's, due 1930, M. & N.	1,500,000	1,000	103	105
The Brooklyn Union	15,000,000	1,000	144	145
1st Con. 5's, due 1948, M. & N.	15,000,000	—	106¾	107
Yonkers	299,650	500	130	—
Out-of-Town Companies.				
Bay State	50,000,000	50	⅛	⅝
" Income Bonds	2,000,000	1,000	—	75
Binghampton Gas Works	450,000	100	—	—
" 1st Mtg. 5's	500,000	1,000	95	100
Boston United Gas Co.— 1st Series S. F. Trust	7,000,000	1,000	82	85
2d " " "	3,000,000	1,000	47½	50
Buffalo City Gas Co.	5,500,000	100	5	8
Bonds, 5's	5,250,000	1,000	59	60
Capital, Sacramento	500,000	50	—	35
Bonds (6's)	150,000	1,000	—	—
Chicago Gas Co. Guaranteed Gold Bonds	7,980,000	1,000	104	106¼
Cincinnati Gas and Electric Co.	29,500,000	100	92	93
Columbus (O.) Gas Co., 1st Mortgage Bonds	1,500,000	1,000	96	98
Columbus (O.) Gas Lt. & Heating Co.	1,682,750	100	90¼	91
Preferred	3,026,500	100	75¼	80
Consumers, Toronto	2,000,000	50	200	204
Consolidated, Baltimore	11,000,000	100	106½	—
Mortgages, 6's	3,600,000		89	100
Chesapeake, 1st 6's	1,000,000	—	—	—
Equitable, 1st 6's	910,000	—	—	—
Consolidated, 1st 5's	1,490,000	—	—	112
Consolidated Gas Co. of N. J.	1,000,000	100	15	—
Con. Mtg. 5's	976,000	1,000	92	95
Bonds	75,000	—	—	100
Denver Gas and Electric	3,500,000	—	102	105
Detroit City Gas Co.	6,580,000	—	—	50
" Prior Lien 5's	5,619,000	1,000	97	100½
Detroit Gas Co., 5's	381,000	1,000	75	80
Equitable Gas & Fuel Co., Chicago, Bonds	2,000,000	1,000	—	101
Essex and Hudson Gas Co.	6,500,000	—	39	40
Fort Wayne	2,000,000	—	—	—
" Bonds	2,000,000	—	55	—
Grand Rapids Gas Light Co., 1st Mtg. 5's	1,850,000	1,000	100	101
Hartford	750,000	25	190	200
Hudson County Gas Co., of New Jersey	10,500,000	—	112	113½
" Bonds, 5's	10,500,000	—	103	103½
Indianapolis	2,000,000	—	78	83
" Bonds, 5's	2,650,000	—	104½	105
Jackson Gas Co.	250,000	50	82	—
" 1st Mtg. 5's	290,000	1,000	97	100
Kansas City Gas Light Co., of Missouri	5,000,000	100	—	36
Bonds, 1st 5's	3,822,000	1,000	102	104
Laclede Gas Co., St. Louis.	10,000,000	100	108¾	109
Preferred	2,500,000	100	94½	102
Bonds	10,000,000	1,000	102½	103
Lafayette Gas Co., Ind.	1,000,000	100	—	60
Bonds	1,000,000	1,000	60	65
Louisville	2,570,000	50	143	145
Madison Gas and Electric Co. " 1st Mtg. 6's	400,000	1,000	106	108¾
Massachusetts Gas Companies, of Boston	25,000,000	100	93¾	94½
Preferred	25,000,000	100	97	97¾
Montreal Gas Co., Canada	2,000,000	100	218	218¾
Nashville Gas Light Co.	1,000,000	100	110	—
Newark, N. J., Con. Gas Co.	6,000,000	—	56	58
Bonds, 6's	6,000,000	—	137	138
New Haven Gas Co.	2,000,000	25	200	—
Peoples Gas Lt. & Coke Co., Chicago	25,000,000	100	106	106¼
1st Mortgage	20,100,000	1,000	—	—
2d "	2,500,000	1,000	104	—
Rochester Gas & Electric Co.	2,150,000	50	88	—
Preferred	2,150,000	50	118	—
Consolidated 5's	2,000,000	—	104¾	105¼
San Francisco Gas Co., Cal.	15,500,000	—	—	—
St. Joseph Gas Co.— 1st Mtg. 5's	1,000,000	1,000	100	102
St. Paul Gas Light Co.	2,500,000	100	—	—
1st Mortgages, 6's	650,000	1,000	104	106
Extension, 6's	600,000	1,000	112⅛	115
General Mortgage, 5's	3,447,000	1,000	97	98
Syracuse Gas Co., N. Y.	1,975,000	100	50	55
Bonds	2,047,000	1,000	101	103
Washington (D. C.) Gas Co.	1,600,000	200	410	412½
1st Mortgage, 6's	600,000	—	—	—
Western Gas Co., Milwaukee	4,000,000	—	—	—
Wilmington (Del.) Gas Co.	600,000	50	361	—

MEETING TIMES OF THE VARIOUS GAS ASSOCIATIONS.

American Gas Institute.—Annual meeting, October 18, 19, 20, 21, 1911. St. Louis, Mo. Officers: President, Donald McDonald, Louisville, Ky. Secretary, A. B. Beadle, 29 West 39th st., N. Y. City.

Canadian Gas Association.—Annual meeting, ——— Officers President, Arthur Hewitt, Toronto, Ont.; Secretary and Treasurer, John Keilor, Hamilton, Ont.

Empire State Gas and Electric Association.—Annual meeting, Nov., 1911. New York City. Officers: President, C. R. Huntley, Buffalo, N. Y.; Secretary, C. H. B. Chapin, 29 W. 39th street. New York City.

Gulld of Gas Managers of New England.—Annual meeting, March. Young's Hotel, Boston; monthly meeting, second Saturday. Officers: President, Walter G. Africa, Manchester, N. H.; Secretary, H. K. Morrison, Brockton, Mass.

Illinois Gas Association.—Annual meeting, time, March, Chicago, Ills. Officers: President, C. B. Strohn, Elgin, Ills.; Secretary-Treasurer, F. E Newberry, Dixon, Ills.

Illuminating Engineering Society.—Annual meeting, Oct. Chicago, Ill., 1911. Meetings of Sections, monthly. Pres't, A. E. Kennelly, Boston, Mass.; Secretary, Preston S. Millar, 29 W. 39th street, N. Y. City. Sections: New York: Secretary, Albert J. Marshall, 36 West 39th street. New England, Secretary, W. S. Farrow, 1240 Massachusetts avenue, Cambridge, Mass. Philadelphia, Secretary, G. B. Muth, 1000 Chestnut street Chicago, Secretary, F. H. Bernhard, Marquette Building.

Indiana Gas Association.—Annual meeting, Jan. 17 and 18, 1912, Indianapolis. Officers: President, S. E. Mulholland, Fort Wayne; Vice-President, Howard L. Olds, Indianapolis; Secretary-Treasurer, Philmer Eves, Indianapolis.

Iowa District Gas Association.—Annual meeting, time, May, ——, 1912; Clinton, Ia, Officers: President, Austin Burt, Waterloo, Ia.; Secretary and Treasurer, G. I. Vincent, Des Moines, Ia.

Kansas Gas, Water and Electric Light Association.—Annual meeting, time, ——— Wichita, Kas. Officers: President, W. A. Scothorn, Hutchinson, Kas.; Secretary and Treasurer, J. D. Nicholson, Newton, Kas.

Michigan Gas Association—Annual meeting, time, Sept. 20, 21, 22, 1911; Detroit, Mich. Officers: President, A. P. Ewing, Detroit, Mich.; Secretary-Treasurer, Glenn R. Chamberlain, Grand Rapids, Mich.

Missouri Electric Light, Gas, Water Works and Street Railway Association.—Annual meeting, April, 1912; St. Louis, Mo. Officers: President, F. E. Murray, Louisiana, Mo.; Secretary and Treasurer, N. J. Cunningham, Springfield, Mo.

National Commercial Gas Association.—Annual meeting, October 23-28, 1911. Denver, Officers: President, C. N. Stannard, Denver; Secretary, Louis Stotz, 29 West 39th street, New York City.

Natural Gas Association.—Annual meeting, May, 1912, Kansas City, Mo.; Officers: President, A. B. Macbeth, Independence, Kas. Secretary, T. C. Jones, Delaware, O.

New England Gas Association.—Annual meeting, third Wednesday in February, 1912; Boston. Officers: President, J. A. Coffin, Gloucester, Mass.; Secretary-Treasurer, N. W. Gifford, East Boston, Mass.

Ohio Gas Association—President, John M. Garard, Columbus, O.; Secretary-Treasurer T. C. Jones, Delaware, O.

Pacific Coast Gas Association.—Annual meeting, Sept. 20, 21 and 22, 1911, Oakland, Cal. Officers: President, F. A. Leach, Jr., Oakland, Cal.; Vice President, W. Baurhyte, Los Angeles, Cal.; Secretary-Treasurer, John A. Britton, 445 Sutter street, San Francisco, Cal.

Pennsylvania Gas Association.—Annual meeting, April, 1912, Williamsport, Pa. Officers President, C. W. Butterworth, Millon, Pa; Secretary-Treasurer, William H. Merritt, Lebanon, Pa.

Society of Gas Lighting.—Annual meeting, December, 1911; monthly meeting, second Thursday. Place, New York City. Officers: President, Fred. S. Benson; Secretary, George G. Ramsdell, 254 West 89th street, New York city.

Southern Gas Association.—Annual meeting, April, 1912, Jacksonville, Fla. Officers: President, H. B. Hoyt, Jacksonville, Fla.; Secretary-Treasurer, E. D. Brewer, Atlanta, Ga.

Southwestern Electrical and Gas Association.—Annual meeting. April 27, 28, 29, 1911; Houston, Tex. Officers: President, W. B. Tuttle, San Antonio, Tex.; Secretary, D. G. Fisher, Dallas, Tex.

Wisconsin Gas Association.—Annual meeting, May 15 and 16, 1912, Milwaukee, Wis. Officers: President, H. M. Buck, Waukesha, Wis.; Secretary-Treasurer, Henry Harmon, Milwaukee, Wis.

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SEE SPECIAL SUBSCRIPTION OFFER, PAGE 1222.

FINANCIAL NOTICES.

DIVIDEND NOTICE.

OFFICE OF THE UNITED GAS IMPROVEMENT CO., N. W. CORNER BROAD AND ARCH STS., PHILADELPHIA, June 14, 1911.

The Directors have this day declared a quarterly dividend of 2 per cent. (one dollar per share), payable July 15, 1911, to stockholders of record at the close of business, June 30, 1911. Checks will be mailed.

1880 4 LEWIS LILLIE, Treasurer.

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LIGHTING ENGINEER wants executive work with large company or manufacturer. Familiar with practical operation of gas and electric lamps.

Address, "ILLUMINATING,"

1879-3 Care this Journal.

Experienced gas chemist desires a position as SUPERINTENDENT OF A GAS PLANT; either coal gas or mixed gas plant. At present employed and practically filling a superintendent's position.

Address, "E. C. S.,"

1880-1 Care this Journal.

Either as MANAGER or SUPERINTENDENT of a gas plant, preferably the former. Has an intimate knowledge of modern accounting methods and is thoroughly familiar with the management of men and the conducting of an office. Nearly 20 years in the business, and can furnish any references required.

1878-tf Address, "F. H. W.," care this Journal.

As manager of a gas property. Am 34 years of age; 12 years in the gas business. Have also operated electric lighting plant. References, present and past employers. Salary, $3,000 per year.

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1878-3 Care this Journal

BY A GAS MAN.

Address, "BUSINESS,"

18 0-2 Care this Journal.

CHEMIST; university graduate; seven years' experience; thoroughly familiar with all phases of gas works' chemistry; competent to take charge of laboratory for large company.

Address, "GRADUATE,"

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ENGINEER, specialized in fireclay and experienced in designing, estimating and erecting gas benches, producers, kilns, etc., desires responsible position.

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1880-1 Nebraska City, Neb,

SUPERINTENDENT for coal gas works in Western town of 10,000. Must be thoroughly competent, with practical experience, and one who can get results. Reply with references and particulars and state salary expected.

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1880-tf Care this Journal.

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Coal Gas Apparatus.
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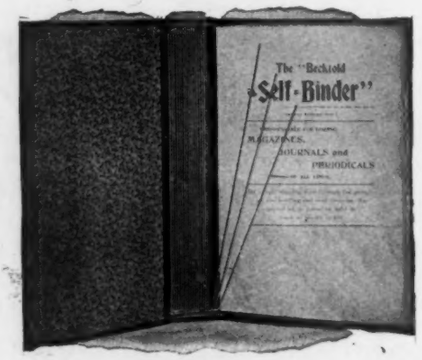

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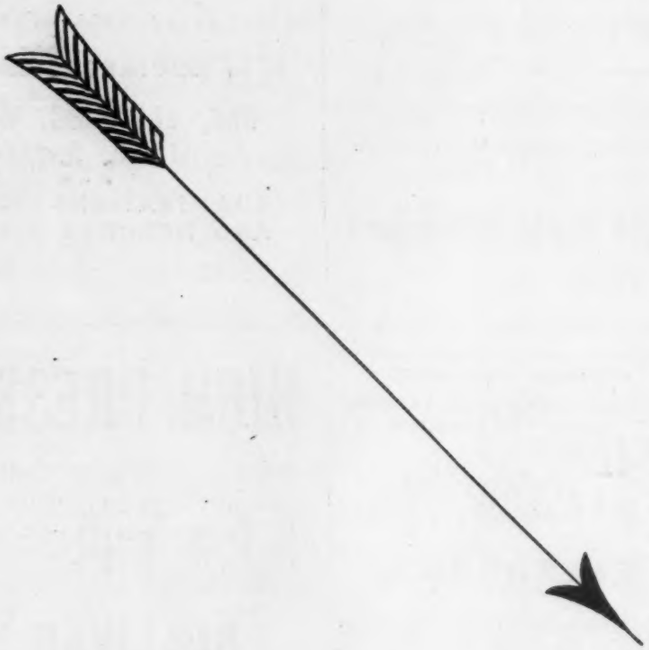

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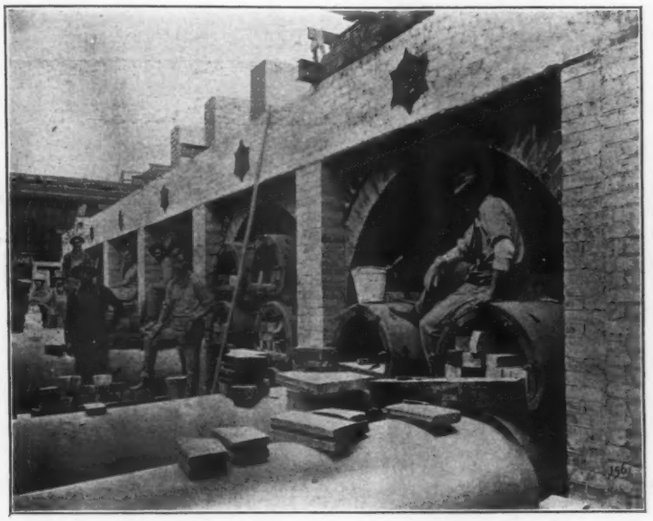

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Day of Week.	MOONLIGHT SCHEDULE.		
	Date.	Light.	Extinguish.
Thursday	1	11.00 P.M.	3.30 A.M.
Friday	2	11.30	3.30
Saturday	3	12.00 F.Q.	3.30
Sunday	4	12.20 A.M.	3.30
Monday	5	12.50	3.30
Tuesday	6	1.10	3.30
Wednesday	7	1.30	3.30
Thursday	8	2.00	3.30
Friday	9	2.20	3.30
Saturday	10	No L.	No L.
Sunday	11	No L. F.M.	No L.
Monday	12	No L.	No L.
Tuesday	13	8.00 P.M.	10.30 P.M.
Wednesday	14	8.00	11.10
Thursday	15	8.00	11.50
Friday	16	8.00	12.20 A.M.
Saturday	17	8.00	12 40
Sunday	18	8.00	1.10
Monday	19	8.00 L.Q.	1.30
Tuesday	20	8.00	1.50
Wednesday	21	8.00	2.20
Thursday	22	8.00	2.50
Friday	23	8.00	3.30
Saturday	24	8.00	3.30
Sunday	25	8.00	3.30
Monday	26	8.00 N.M.	3.30
Tuesday	27	8.00	3.30
Wednesday	28	8.00	3.30
Thursday	29	8.00	3.30
Friday	30	8.00	3.30

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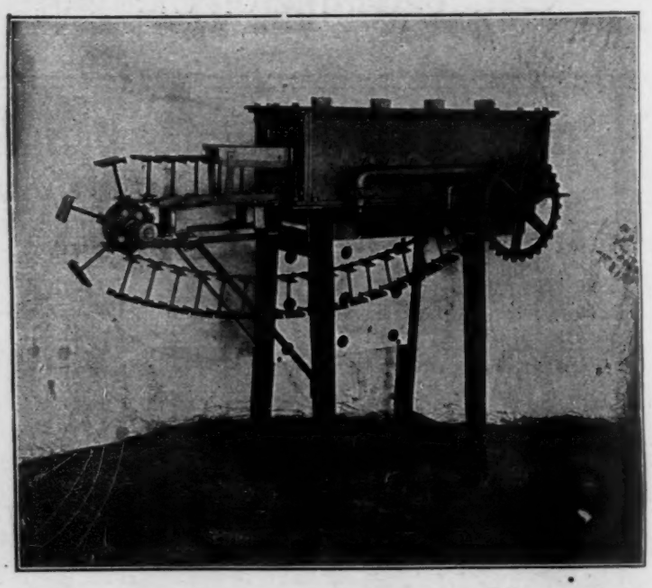

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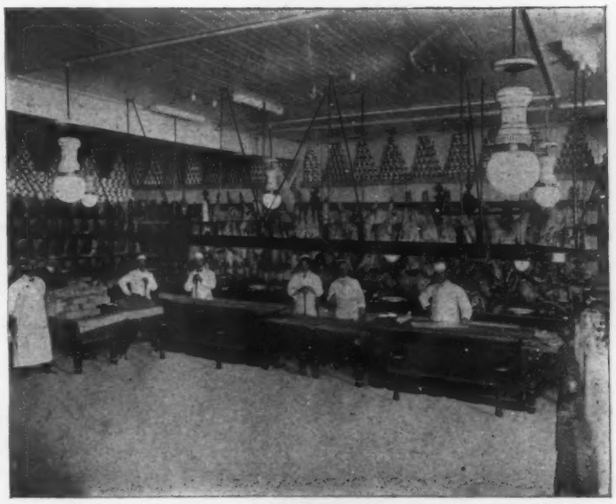

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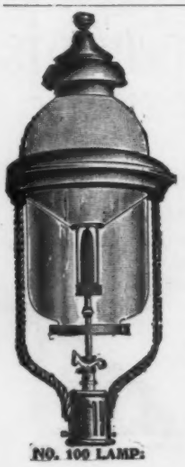

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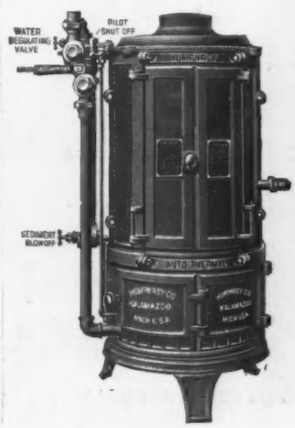

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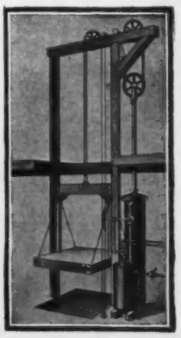

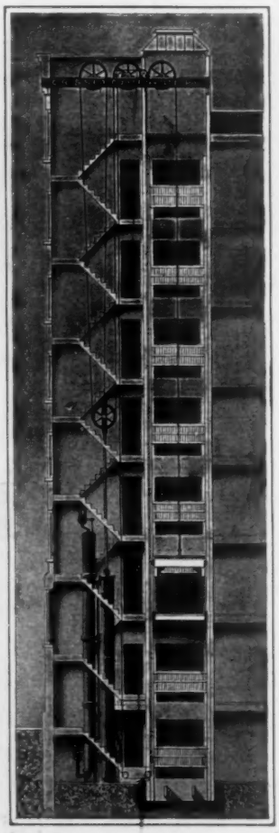

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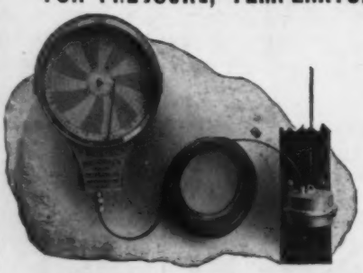

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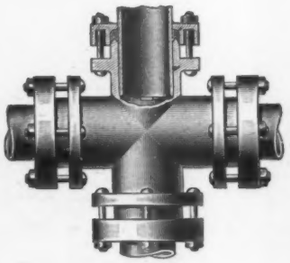

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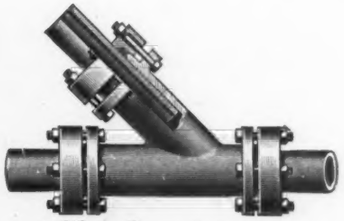

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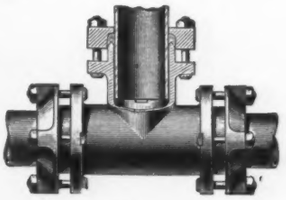
Style 29.



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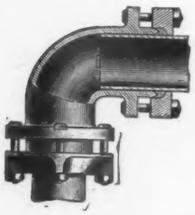

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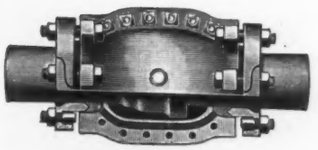

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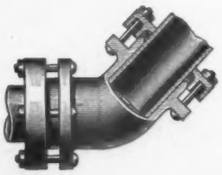

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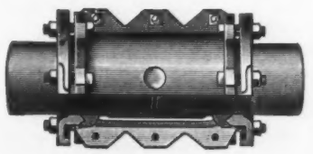

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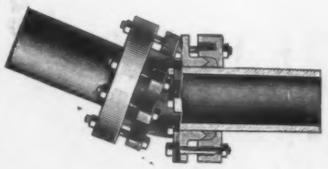

Angle Couplings.
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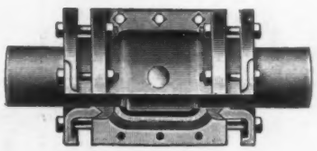

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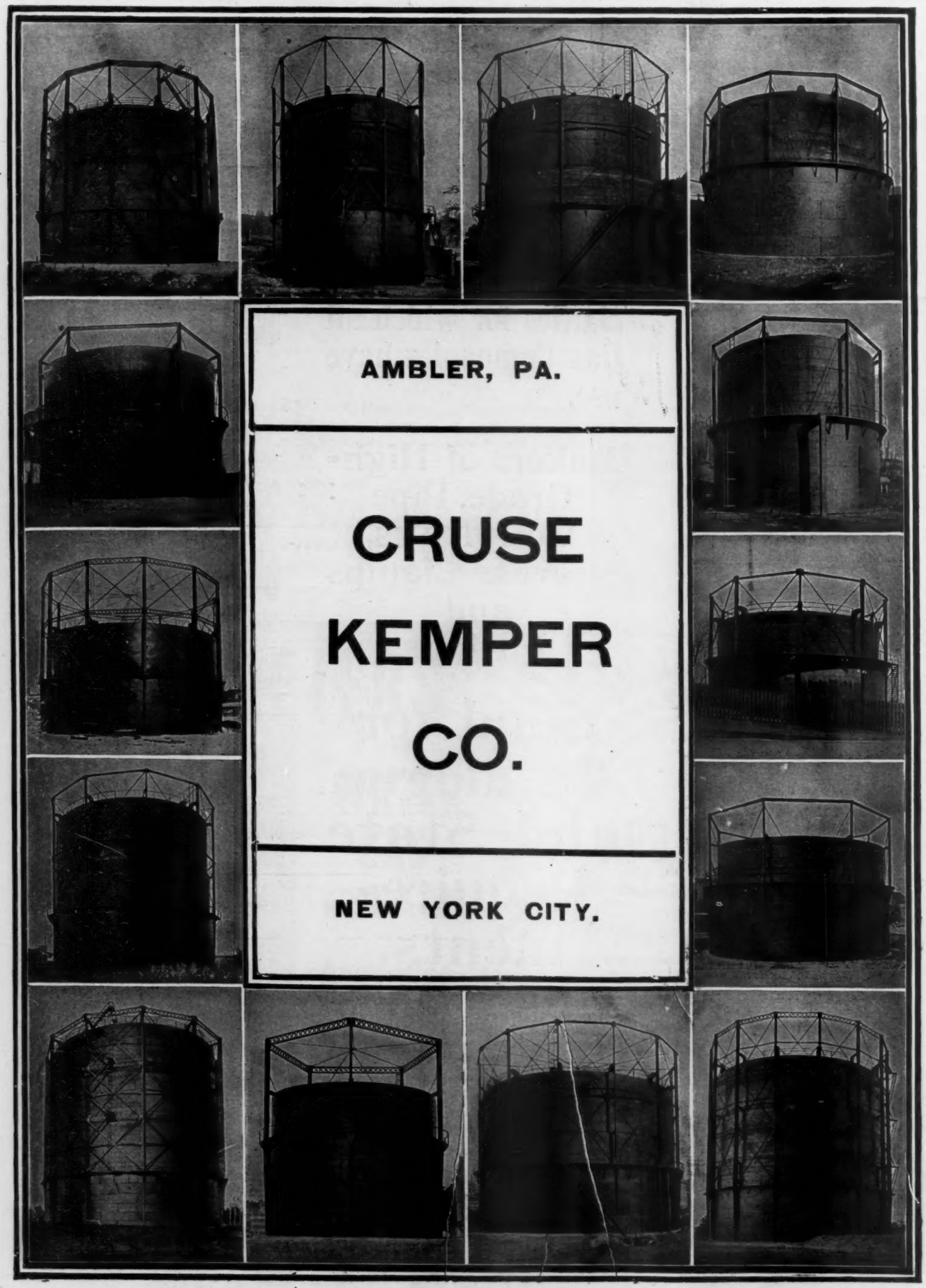
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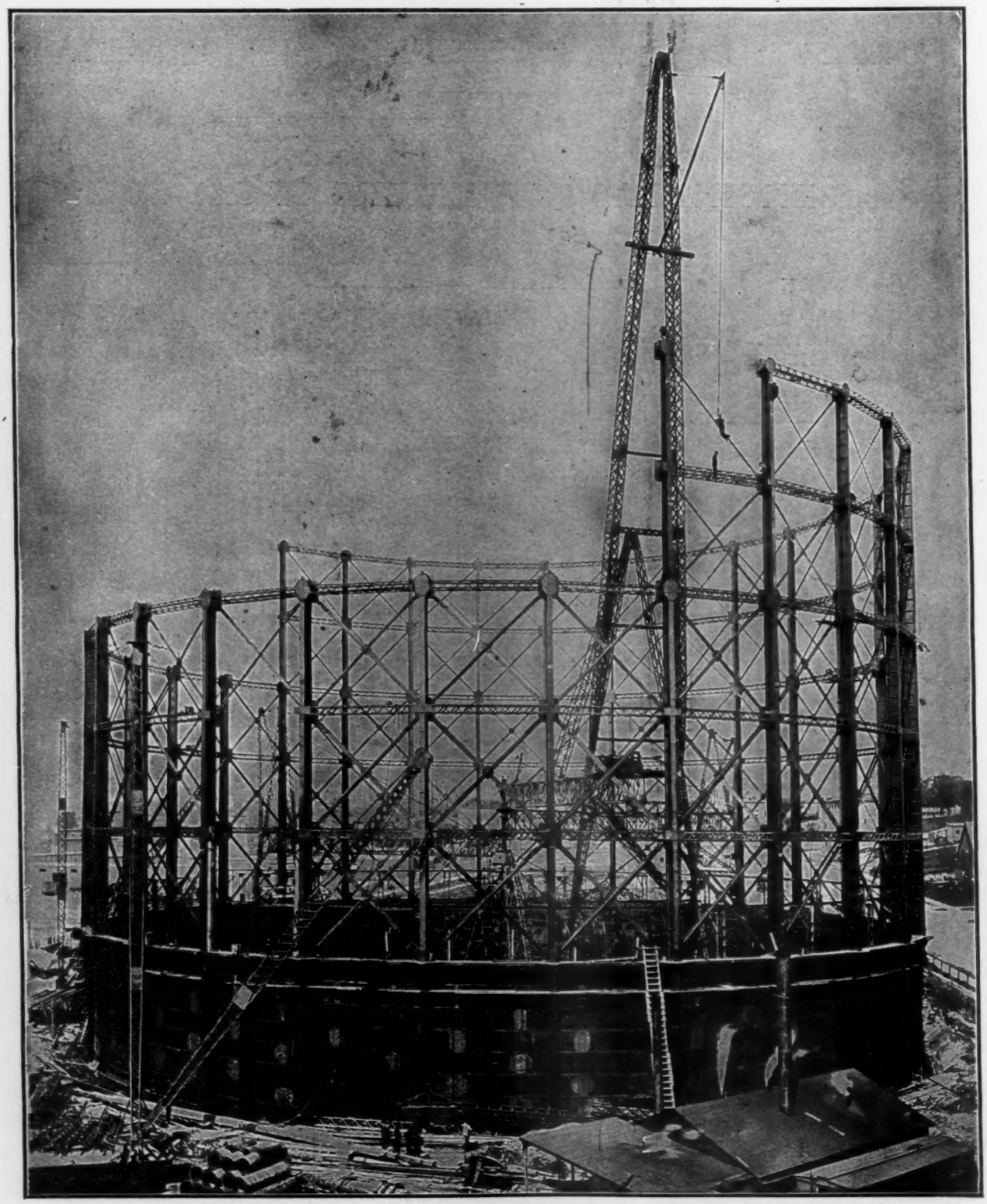

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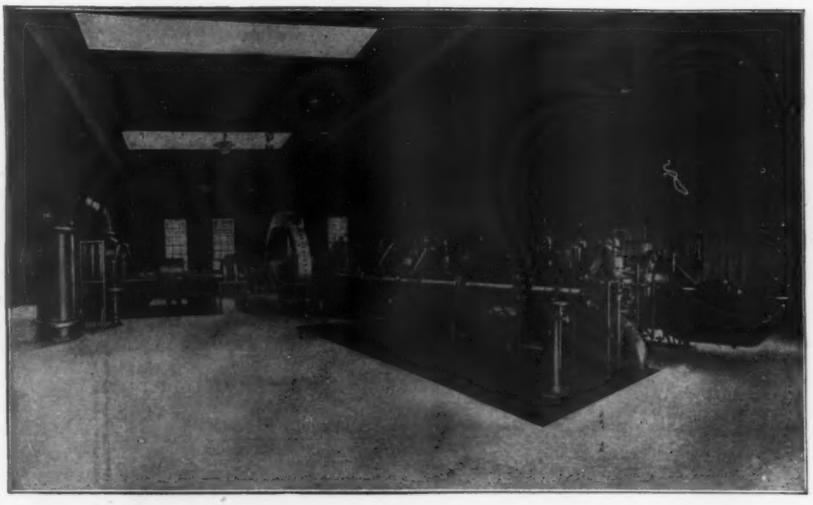

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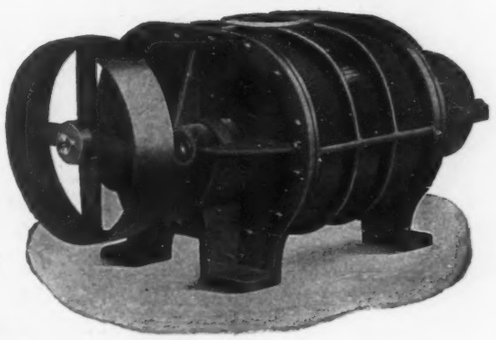

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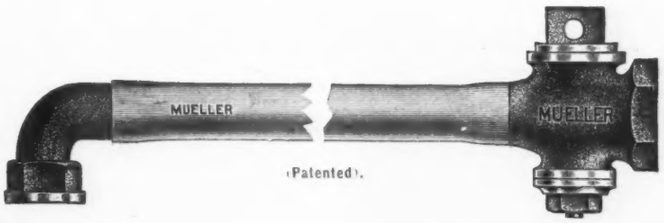

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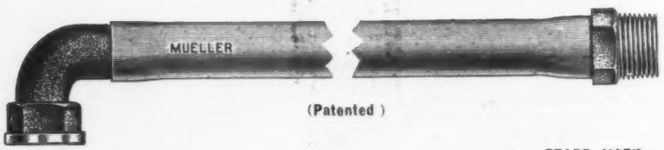

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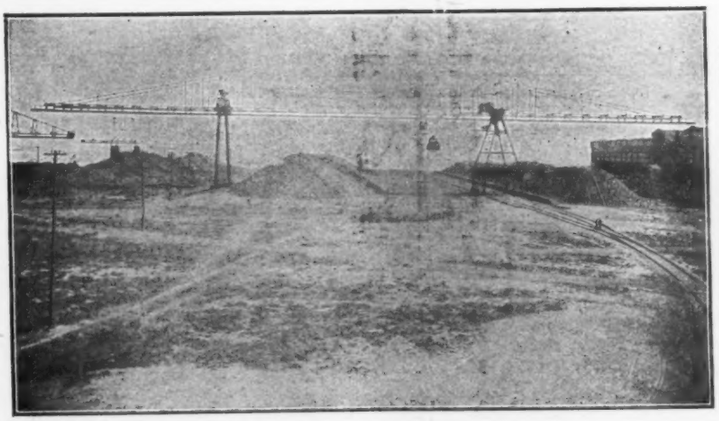

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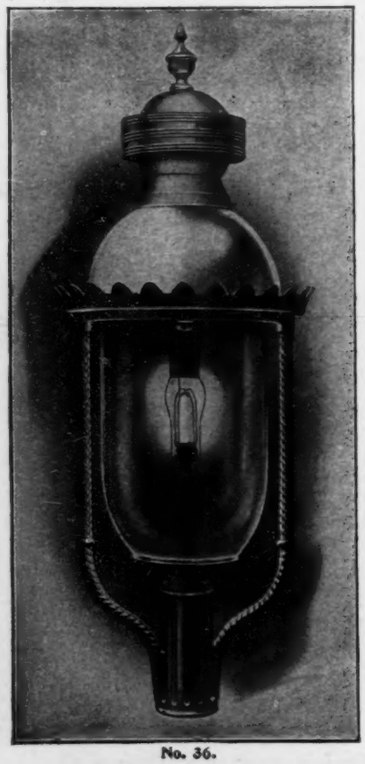

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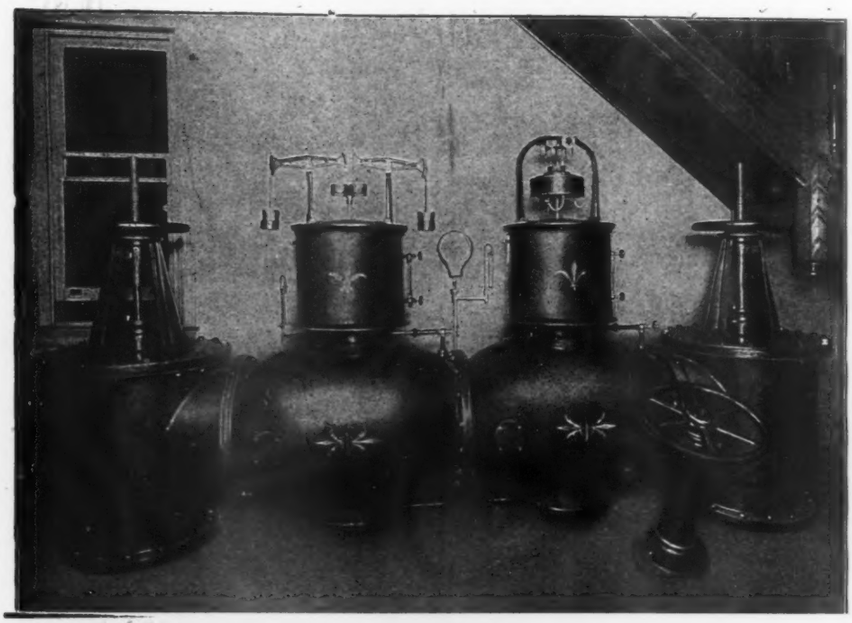

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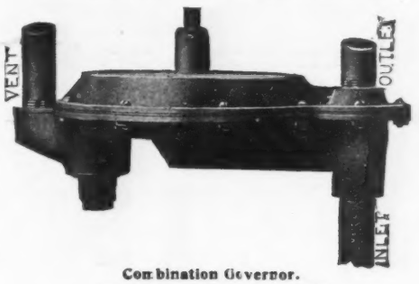

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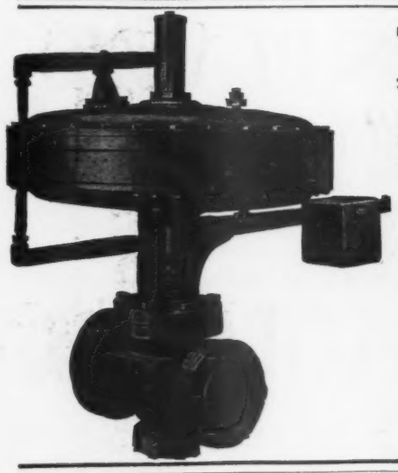

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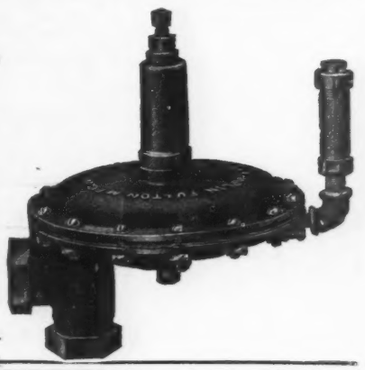

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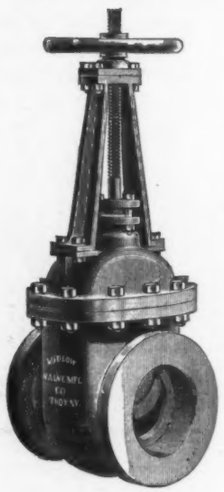

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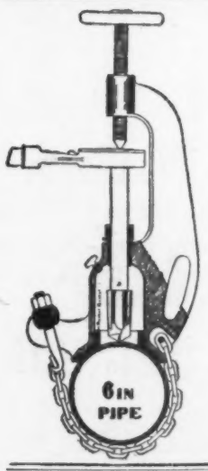

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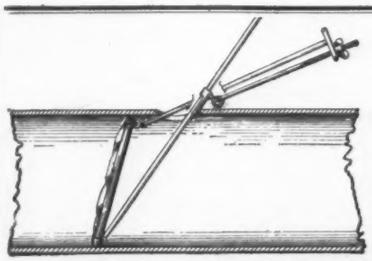

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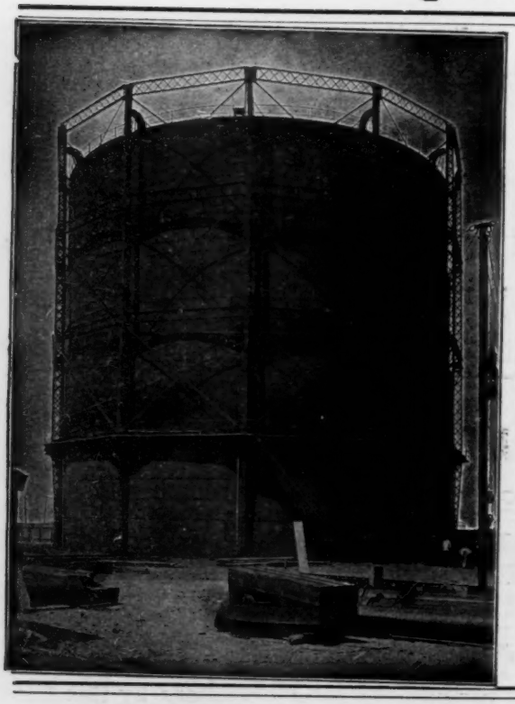

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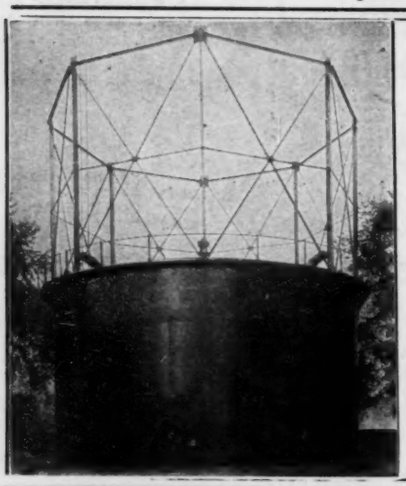

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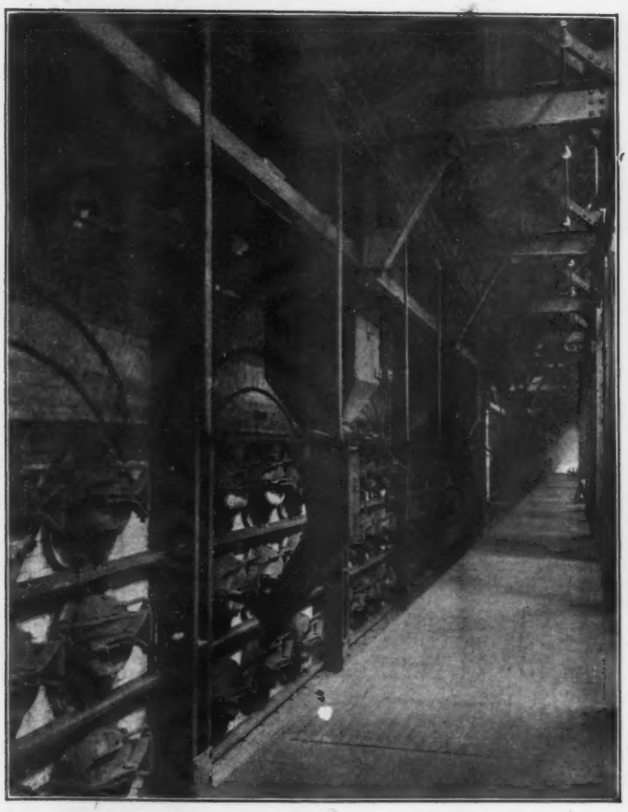

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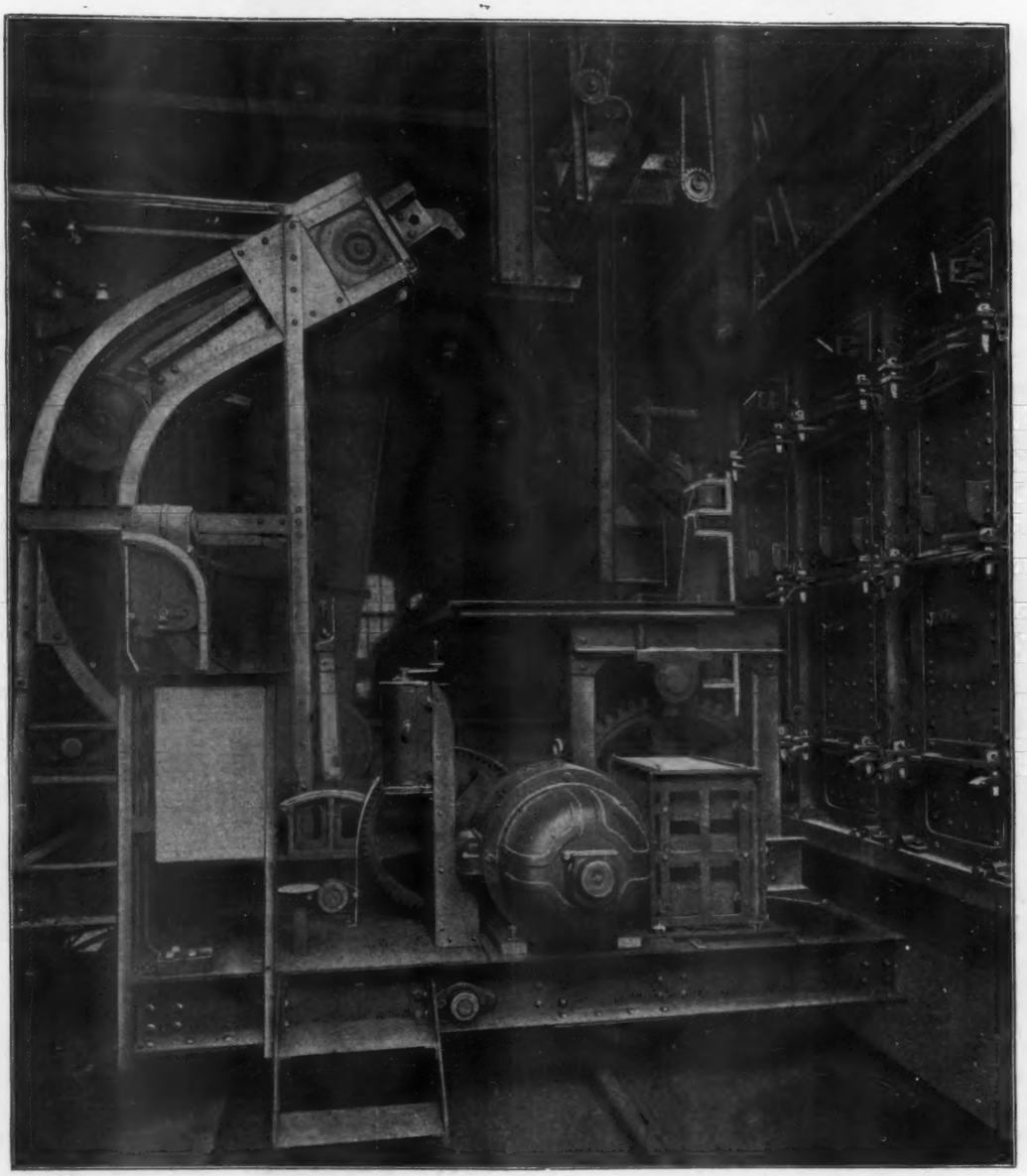

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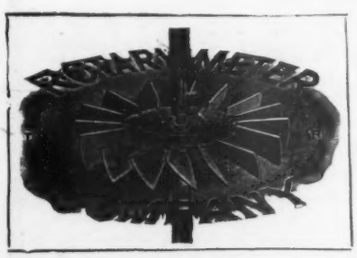

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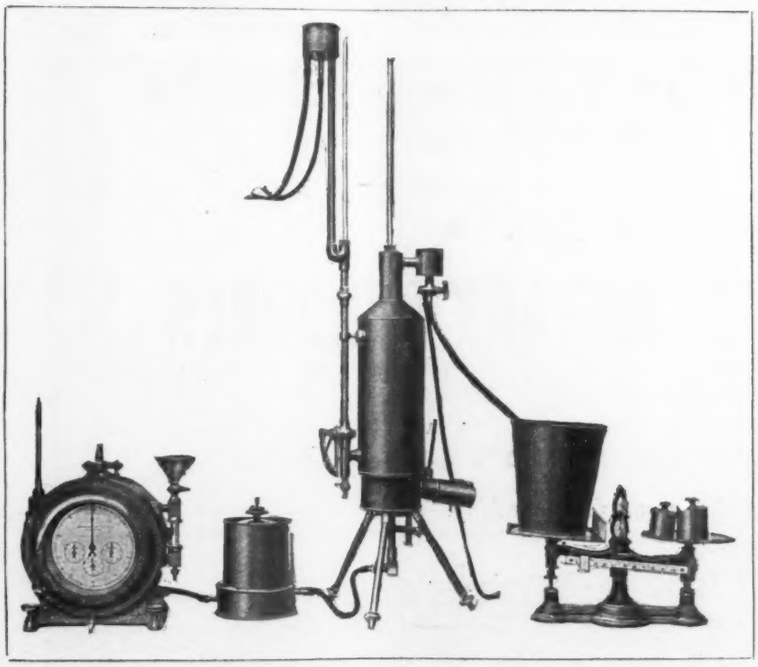

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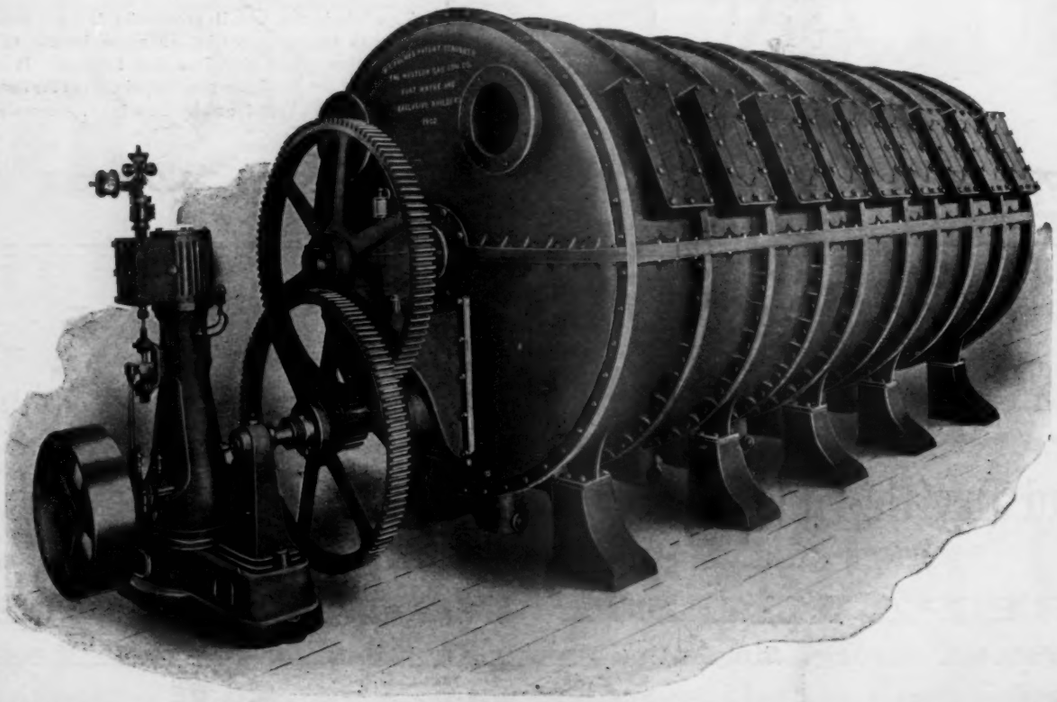

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